




8-1-2013

Soaringwords Empirical Research to Measure the Well-being of Hospitalized Children

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Buksbaum, Lisa, "Soaringwords Empirical Research to Measure the Well-being of Hospitalized Children" (2013). *Master of Applied Positive Psychology (MAPP) Capstone Projects*. 40.
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Abstract

Positive psychology interventions can potentially significantly enhance the quality of life for pediatric patients and their loved ones. This study was designed to empirically measure the impact of a positive intervention on the well-being of pediatric patients. In a one-time 30-60 minute session, 220 patients received an inspirational SoaringSuperhero® message and artwork (from a stranger) and then were invited to create a superhero message/artwork for someone else. Before and after, participants completed a questionnaire, compiled from reliable, accredited survey instruments, administered by hospital employees, Child Life Specialists, and hospital volunteers. For every emotion, both adolescents and children were significantly more positive and less negative. Findings suggest that these positive interventions should be part of pediatric healthcare to encourage patients to take active roles in their own healing and the healing of others. Future endeavors include expanding the study to other hospitals and testing the efficacy of other Soaringwords' positive interventions. Altogether, this study suggests that the power of the Soaringwords' intervention comes from impacting both physical and psychological systems in a measurable way to allow the child and his or her support system to **SOAR** (Somatic response, Outcomes, Agency, Reciprocity), despite the many challenges of illness.

Keywords

Hospitalized Children, PERMA, Well-being, Altruism, Reciprocity, Empirical Data, Pediatrics, Child Life, Art Therapy, Creative Writing, Positive Interventions, Healing, Somatic, Outcomes, Agency

Disciplines

Alternative and Complementary Medicine | Arts and Humanities | Child Psychology | Cognitive Psychology | Creative Writing | Education | Experimental Analysis of Behavior | Health Psychology | Pediatric Nursing | Recreational Therapy

Soaringwords Empirical Research to Measure the Well-being of Hospitalized Children

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University of Pennsylvania

A Capstone Project Submitted

In Partial Fulfillment of the Requirements for the Degree of

Master of Applied Positive Psychology

Advisor: Dr. Margaret L. Kern

August 1, 2013

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Introduction

Well-being and Health

Each day, pediatric patients battle against serious medical challenges and the multiple indignities of living in an institutional setting while struggling to maintain a pre-hospital identity. Throughout the day, patients and their parents make dozens of key choices that enable them to flourish and experience positive emotions and self-expression, or to feel hopeless and isolated. What can hospitals, families, friends, and even strangers do to ease the experience?

The current investigation focuses on Soaringwords, a non-profit organization that I founded in 2001. Soaringwords' mission is to lessen the impact of serious illness by connecting ill children and their families to a community of compassionate volunteers who inspire them to "Never give up!" Soaringwords embraces these children and families by providing fun, creative, and educational activities both in person and online to cultivate joy, hope, laughter, and healing. No other non-profit organization is, inviting ill children to "pay it forward" to help others. For the past 12 years, Soaringwords has provided fun, creative and educational activities that have been enjoyed by hospitalized children and their families, inner-city students in schools in more than thirty states and more than 120,000 employee volunteers in Fortune 500 companies. Soaringwords works with more than 100 hospitals nationwide and in other countries such as Israel, Canada, the U.K., Belgium, and many others. Soaringwords has reached more than 250,000 ill children and their families.

I was motivated to start this organization after three experiences with death and illness occurred in my family within a ten-month period. Gary, my younger brother and only sibling, died suddenly from an asthma-induced heart-attack at the age of 35. Five weeks later, my father had his second bout of cancer and was hospitalized for several weeks. Ten months after Gary's death, my oldest child Jonathan was catastrophically ill. When my son was ill, it came to my attention that 22 million children in the United States suffer from chronic or serious illnesses, I knew more had to be done. During the height of my son's illness, I was walking along the beach and the name and feeling for Soaringwords came to me. I had a knowingness that everything I had done in my life had prepared me to launch an organization to support millions of ill children and their families. Today, my father and son are fully recovered.

The reason I launched Soaringwords was to connect pediatric patients and their families to emotional and physical resources of strength and healing in order to create a transformation that would mitigate suffering and encourage maximum healing. Many Soaringwords activities use curricula built around artists, authors, musicians and museum exhibits to share joy-inducing activities with pediatric patients and their families. In addition, the organization has collaborated with leading experts in mindfulness, gratitude, compassion, resilience, and hope to share useful content with a global audience of children and families who are grappling with serious illness, whom would otherwise not be exposed to this scientifically-based knowledge.

Since its inception, the organization has collected extensive qualitative feedback on Soaringwords interventions. My Capstone seeks to validate the impact of one of the Soaringwords intervention through quantitative research to measure changes in well-being as reflected in positive affect, engagement, relationships, meaning, and accomplishment in addition to self-reported health, hope, gratitude, strength and resilience, agency and reciprocity as a result of participating in the positive intervention.

Introduction to Positive Psychology

Positive psychology reinforces the wisdom from the great thinkers such as William James, who in 1906 called for a new branch of psychology to study optimal human functioning (Pawelski, 2013). This was a departure from the “traditional” science of psychology that focused on pathologies, analyzing what was wrong in patients, and reliance on a medical model designed to mitigate illness and suffering, find a cure, and eliminate disease. This focus on eradication of the negative resulted in the cures and immunizations for dozens of conditions, yet mitigation of the negative is not the same as the enhancement of the positive (Seligman, 2011). Several decades later, Abraham Maslow and Carl Rogers used the term “positive psychology” reflecting the concept of “self-actualization” to describe a “fully-functioning person” (Maslow, 1970). Taking this one step further, Carol Ryff (1989) proposed a model of psychological flourishing that includes six dimensions: autonomy, environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance.

The field of positive psychology was officially founded by Dr. Martin Seligman in 1998 during his inaugural address as president of the American Psychological Association (APA) as he implored psychologists to explore what makes life worth living while measuring the enabling conditions that allow a person to flourish (Seligman, 2011). Today, fifteen years after Seligman's call to action, there are thousands of scientists and positive psychology practitioners who are taking a strengths-based approach to study specific ways to enhance what is going well in people's lives, rather than simply focusing on the reduction of illness and suffering (Fowler, Seligman, & Koocher, 1999). When people focus on enhancing their interests, talents, inherent character strengths, and values, it can lead to greater happiness, success, and well-being, beyond simply reducing problems (Gander, Proyer, Ruch & Wyss, 2012).

Integrating Positive Psychology and Pediatric Healthcare

According to a 2010 study in the *Journal of the American Medical Association*, 26% of children in the U.S. suffer from a long-term health problem (Szabo, 2011). Over the past 40 years, scientists and doctors have made significant advances in treating pediatric illness. For example, the five-year relative survival rate among children with cancer has improved from 58% for patients diagnosed in 1975–1977 to 80% for those diagnosed in 1996–2004 (Ries et al., 2007). While these medical advances are impressive, when a child is seriously ill, his or her social and emotional worlds can be shattered. Pediatric patients are isolated from friends, classmates, siblings, and daily routines. Hospitalization is a stressful and painful experience for a child with limited opportunities for choice and control. Patients are bombarded with invasive procedures, assaulted with sensory overload from loud and scary machines, and examined at all hours of the day and night by medical professionals. When a child is seriously ill, he or she often experiences diminished positive emotions, a profound sense of isolation, and the feeling that life is out of control (Thompson, 2009).

Positive psychology can potentially and significantly enhance the quality of life for pediatric patients because interventions that promote psychological well-being have inherent benefits (Aspinwall & Tedeschi, 2010). Even though circumstances of serious illness can weigh on an ill child and his or her family's well-being, positive actions and attitudes can potentially offset the crushing isolation (Huppert, 2009). The

healing salve of resilience, love, and engagement in and appreciation of life are intricately bound with some of the greatest challenges and trials (Ryff, Singer, & Love, 2004). Pediatric healthcare can be transformed by augmenting state of the art medical care with excellent psychosocial care for children. Positive psychology interventions have the ability to help ill children and their loved ones learn how to incorporate positive language, thoughts and actions with flexible and creative thinking, pro-social behavior (Huppert, 2009), key protective factors (Ryff & Singer, 2004), and self-efficacy (Maddux, 2009) to experience daily moments of well-being in the midst of serious illness. Concepts from positive psychology can potentially help ill children and parents strengthen resilience, maximize positive emotional experiences, and help maintain a sense of normalcy in the face of serious illness and disruptive medical experiences.

PERMA: A Five-Part Positive Psychology Construct

Seligman defines flourishing as having high positive emotion plus any three of the following features: self-esteem, optimism, resilience, vitality, self-determination, and positive relationships (2011). Seligman's Well-being Theory has five dimensions: Positive emotion, Engagement, Relationships, Meaning, and Accomplishment (forming the acronym PERMA). Seligman suggests that each element has three properties: 1) it contributes to well-being; 2) many people pursue this element for its own sake, not merely as a stepping stone to get to another element; and 3) it can be individually defined and measured, apart from the other elements. For the purposes of this study, PERMA provides a general framework for connecting positive psychology theory and the Soaringwords interventions, as will be enumerated below.

Positive affect. Several reviews and meta-analyses have demonstrated the importance of positive affect for health outcomes (Diener & Chan, 2011; Howell, Kern, & Lyubomirsky, 2007; Lyubomirsky, King, & Diener, 2005; Pressman & Cohen, 2005; Veenhoven, 2008). Lyubomirsky et al.'s (2005) review of the relevant experimental literature on the connection between positive affect and favorable characteristics suggested that positive affect fosters many resources and skills including sociability, altruism, liking of self and others, strong bodies and immune systems, and effective conflict resolution skills. The authors concluded that one of the key findings in the experimental literature is the strong evidence that short-term

positive affect, the trademark of a happy person, causes an array of behaviors representing success. That is, positive affect may lead to successful outcomes, rather than the more conventional interpretation that successful outcomes supersede happiness. Similarly, Howell, Kern and Lyubomirsky's (2007) meta-analysis examined the impact of well-being on objective health outcomes. After reviewing 150 studies, the researchers found some evidence that well-being can affect both short and long-term health outcomes and moderate declines in disease. Pressman and Cohen (2005) noted that over twenty times more studies have examined the association between physical health and depression than the correlation between health and happiness. They conclude that happiness was associated with decreased morbidity and increased longevity in four out of six studies, suggesting that happiness is probably an important positive emotion for health. Fredrickson (1998) posits that positive affect acts as a buffer that influences the intensity of and recovery from stressful events.

The theory that experiencing positive emotions can have a positive cascading effect on sociability, altruism, liking of self and others, physical outcomes, and immunity is the foundational assumption that my Capstone is built upon, specifically among pediatric patients. The idea that well-being can affect both short and long-term health outcomes and moderate declines in disease suggests that interventions that can boost happiness and increase the experience of positive emotions will help stimulate positive health outcomes. The search for happiness and meaning are two powerful goals that motivate people (Seligman, 2011). Happiness and meaningfulness are positively correlated with many common factors including feeling connected to other people, feeling productive, and not feeling alone or bored (Baumeister, Vohs, Aaker, & Garbinsky, 2012). Happiness is mainly about getting what one wants and needs whereas the emotion of meaningfulness is linked to doing things that express and reflect the self, and in particular doing positive things for others.

Engagement. Aristotle, William James, and Mihalyi Csikszentmihalyi each suggested that the act of experiencing well-being is an active, life-long process. William James (1899) posited that feelings are difficult to regulate and since we can control actions by the force of will, then we can indirectly regulate our feelings by acting our way into new realities. Among youth, studies on engagement have focused on three

main domains: psychological/emotional engagement (interest, identification, belonging, positive attitude about learning); behavioral engagement (participation and involvement in academic, social, or extracurricular activities); and cognitive engagement (a student's level of learning, being thoughtful & purposeful in the approach to school tasks, and willingness to exert effort to comprehend complex ideas or master difficult skills) (Appleton, Christenson, & Furlong, 2008; Fredrickson et al., 2011).

When a person experiences deep psychological engagement, this is known as a state of flow (Csikszentmihalyi, 1990). Flow is a peak state that is so engrossing that nothing else seems to matter; one loses oneself into flow and merges with the activity, afterwards often experiencing feelings of exhilaration, completeness, serenity, and fullness. Children may lose a sense of time and enter flow when they are completely engaged in a compelling book, dramatic play, or captivating art project.

According to Csikszentmihalyi (1990), part of becoming a complex self is the result of two psychological processes. The first is *differentiation* - movement towards unique self-ability to separate oneself from others. In order to experience well-being, it is essential that hospitalized children differentiate so that they are able to distinguish their "core self" from the illness. In other words, children need to separate themselves from their diagnoses and the physical trappings of the illness, remembering that they are themselves, not just a cancer patient or the child attached to the IV pole. The second process is *integration* - union with other people and ideas, beyond the self. With a steady stream of attendants, nurses, and doctors who interact with patients each day, there is an opportunity to use these encounters to identify with these caregivers, to model behavior, and to build hope (Lopez et al., 2004). Taken together, when a child learns to differentiate himself from the illness and integrate with his "core self" and feel gratitude and connection with his caregivers, he may experience flow, which may enhance his capacity to persevere in the face of illness. In this way, the child may be able to experience more well-being, meaning, and purpose each day.

Relationships. "Love is the amazing realization that another person actually means as much or more to me than myself" (Vaillant, 2008, p. 88). Two prominent love researchers, Harry Reis and

Shelly Gable (2003) argue that solid relationships are the single most important variable in life satisfaction and emotional flourishing. When things are going well in our lives, often times it is easy to take people or circumstances for granted. However, when tragedy strikes--such as when a child is hospitalized--feelings of love, compassion, interdependency, and connection come into sharper focus. During times of trauma, the ability to love and be loved is critical and must be protected at all three relationship levels—individual, dyad (between two people), and in groups (such as families or the broader community, including the classroom) in order for a pediatric patient to flourish.

Resilience is bolstered during times of trauma through these loving relationships (Fredrickson, 2009). While pediatric hospitalization is traumatic, research from other populations who experienced severe life trauma suggest that through good relationships, people can rise above challenging circumstances and experience well-being, rising above the trauma (Lyubomirsky, 2007). For example, John Bowlby's research on attachment shows the powerful redemptive impact that the continuous and warm presence of one caring person had on children who were orphaned during World War II (Bowlby, 1951). Similarly, another study measured two cohorts of 237 college students from Harvard and 332 disadvantaged non-delinquent inner-city youth from Boston for sixty-eight years to measure how the participants overcame traumatic childhoods of abuse or neglect. (Vaillant & Mukamal, 2001) The defining factor that was tied to participants' ability to experience greater well-being was the presence of one loving or supportive person in their lives. Both of these studies suggest that pediatric patients can be buoyed by the attention, compassion, tenderness and positive relationships of Child Life professionals and hospital employees, and parents.

The ability to love and be loved is necessary salve to combat the harsh impact of pediatric hospitalization. Children miss their routines, friends, and classmates. They may not feel well and may not fully understand the implication of their illness. Harry Harlow's studies on baby monkeys suggest that infants and children are pre-disposed to form attachments to objects that are easy to cuddle in order to form intimacy and closeness (Harlow, 1958). When children are hospitalized, they are extremely vulnerable to feelings of isolation and despair, which is why they require physical affection and reassurance. An orderly

with a special smile, a nurse who always takes the time to share a kind word or a funny joke, a friendly visit from a compassionate volunteer, a doctor's assistant who holds the hand of a patient while he is getting an injection -- all of these small interactions will help the child feel grounded and secure. In essence, other people and loving relationships matter to well-being (Peterson, 2006).

Meaning. Seligman attributes meaning in life to belonging to or serving something larger than the self (Seligman, 2011). Several well-being theories consider meaning in life as a primary ingredient in human well-being. Viktor Frankl (1963) was a founding source of inspiration for modern meaning in life research. Frankl's personal survival after being subjected to the atrocities of the Nazi concentration camps was the basis for his book, *Man's Search for Meaning*. Stripped of everything in the concentration camp – possessions, food, any physical or emotional comforts, and security, he posited that the only thing remaining was one's ability to choose one's attitude in a given set of circumstances. Frankl's hopeful view of man's capacity to transcend suffering suggests that people function best when they have a sense of meaning and possess a life purpose (Steger, Sheline, Merriman, & Kashdan, 2012). Steger defines meaning as having two dimensions: comprehension and purpose. *Comprehension* encompasses a person's ability to make sense and understand one's life by finding patterns, consistencies and significance in life experiences and summarizing the most salient and motivating components. Comprehension integrates the various domains of individuals' lives, helping people understand their selves, the world around them, their unique immediate community and their interactions. *Purpose* refers to highly compelling long-term goals that people are passionate about and the pursuit of their most important strivings and aims in life (Steger, 2009).

Accomplishment. A sense of accomplishment is especially meaningful for pediatric patients since they often have little control over their lives, due to their medical condition and social isolation. Csikszentmihalyi (1990) offers two strategies to improve the quality of life: one is to make external conditions match our goals, which often is not possible in the rigid hospital environment. The second strategy is to change how we experience our external conditions, which requires self-control and accumulated practice. For example, parents and child life professionals can help patients cultivate the ability

to recognize progress and accomplish goals by highlighting accomplishments and reinforcing progress throughout each day. When a child and his or her family are immersed in a medical challenge, often the daily acts of living that the child can or can no longer accomplish take on new meaning and poignancy. Dr. Chris Feudtner (2009) talks about giving patients and families “small breaths of hope” to sustain them during medical challenges so that pediatric patients and their families still have a means to acknowledge the small wins. Children should also be encouraged to work with intensity and stamina, and not be coddled excessively simply because they are in the hospital.

Grit, which may be an important asset for accomplishment, is defined as perseverance and passion for long-term goals (Duckworth et al., 2007). Caretakers and hospital personnel may be able to enhance a child’s grittiness by teaching him or her how to appreciate creativity, community, and what is going well in their day. Teaching and modeling these behaviors can help children experience a sense of accomplishment in the face of tremendous challenges (Koller, 2008). I believe that if a hospitalized child and his or her parents can learn to focus on projects that a child can accomplish in the course of a day, they will be better equipped to stay positive and choose to not let the current health condition, hospital environment, and isolation from family and friends get them down. Instead, they will try to focus on any positive aspect of interactions throughout the day as an opportunity to accentuate gratitude, joy, hope, and meaning and, in this way, experience moments of accomplishment.

The choice to be gritty can be exhilarating because it actually gives patients and families a sense of control, instead of giving up or being overwhelmed by external variables that they cannot influence. Patients can make the choice to accomplish something. In this way, a patient can experience a sense of control that she is taking an active role in her care. Choice and self-control may lead to flourishing in light of the bleak scenario of pediatric illness. James Maddux’s (2009) self-efficacy theory explains that people’s belief in their capabilities to produce an intended outcome results in few limits to what they are capable of accomplishing. When patients and families choose

not to give into negativity and despair, it can provide a sense of control. Children who choose to engage in therapeutic play or other positive interventions (such as diaphragmatic breathing or a healing visualization) will experience less physiological stress as indicated by lower blood pressure and pulse rate, less palm sweating than children who did not have the opportunity for the same positive interventions (Koller, 2008).

Character Strengths

Beyond PERMA, one of the most significant contributions to the historical discourse on well-being was the development of the Character Strengths and Virtues Classification (Peterson & Seligman, 2004). The Character Strengths and Virtues (CSV) Classification codifies positive characteristics and virtues of the human experience, a definitive state-of-the-art assessment tool and guide for people to identify their individual character strengths. The CSV was compiled after three years of globe-spanning research as leading scientists searched for universal character strengths gathered from artifacts in art, literature, and music. The research analyzed these artifacts across time, geography, world religions, and multi-cultural relevance (Peterson & Seligman, 2004). The 24 strengths are: creativity, curiosity, open-mindedness, love of learning, perspective, bravery, persistence, integrity, vitality, love, kindness, social intelligence, loyalty, fairness, leadership, forgiveness, humility, prudence, self-control, appreciation of beauty, gratitude, hope, humor, and spirituality. Everyone has signature strengths (Peterson & Seligman, 2004), and empirical research posits that use of signature strengths in new ways can lead to feelings of enhanced well-being, which can last for up to six months (Gander, Proyer, Ruch, & Wyss, 2012). Self-awareness and acknowledgment of ones' strengths and connection to one's thoughts and feelings is the first stage to being able to flourish. Intrinsic motivation is the guiding force for successful integration of positive thoughts, feelings, or actions (Schueller, 2010). Self-awareness enables people to realize their core strengths (Park, Peterson, & Seligman, 2004) and enjoy using them in their lives (Park, 2004). Signature strengths contribute to individual fulfillment, satisfaction, and positive emotions (Peterson, 2006). Over the past 12 years, I have

seen many patients use their signature strengths in Soaringwords' positive interventions, one of which is the basis of my empirical research study.

The Current Investigation

Just as a seed or sapling grows with the right amount of water, nutrients, and sunlight, I suggest that ill children can flourish when they engage in daily positive psychology interventions that nourish and strengthen their ailing minds and bodies. When parents are confronted with a serious illness or end of life issues for their child, this is a narrow place (Kaplan, 1973) because the illness tends to take precedence over other facets of daily life, often leaving little room for anything else. The desire for micro-moments of pleasure and normalcy for the ill child are healing anchors that can help parents find courage to navigate turbulent storms. Since 2001, Soaringwords has shared positive interventions with more than 250,000 hospitalized children and families to inspire them to increase well-being and facilitate healing.

The purpose of my Capstone is to empirically measure the impact of a Soaringwords superhero intervention on enhancing positive emotions and overall well-being of pediatric patients. Briefly, participants received a superhero message and artwork from another child, and then created their own artwork and message to give to another child. The next section documents the method of the empirical study. In addition to the quantitative results, I qualitatively evaluated hundreds of individual SoaringSuperhero artifacts and linked them to empirically-based positive psychology findings (see Discussion and Appendix V). Based upon the scientific literature reviewed above, I expected that when pediatric patients receive a superhero message and artwork from another child and the patient creates a superhero to donate to another person, it has a positive impact on enhancing the patient's well-being.

Method

Participants

There were a total of 250 pediatric patients who participated in the study. Of these, there were two groups, one that received the full Soaringwords intervention (i.e., answering the survey questions, receiving the Soaringwords message and artwork, and creating a message/artwork for another child); the other group

of patients received a partial intervention (i.e., answering the survey questions and receiving a message/artwork, but not creating a message/artwork for another child). This report focuses on 220 youth who received the full intervention. The following two tables summarize demographic information on the patients' gender and age.

Gender

Age group		Frequency	Percent
age 6-9	Male	30	50.8
	Female	29	49.2
	Total	59	100
age 10-18	Male	48	43.6
	Female	62	56.4
	Total	110	100

Age

Age group	N	Mean	SD	Min	Max
Age 6-9	59	7.93	1.19	6.00	9.00
Age 10-18	110	13.53	2.38	10.00	18.00

Measures

The survey was designed to measure the impact of a Soaringwords' positive intervention on hospitalized children self-reported scores before and after the intervention. Questions were compiled from reliable, accredited survey instruments, PROMIS® CHOP Measures of Meaning scale, which was developed by a team of researchers at the Children's Hospital of Philadelphia, is comprised of three domains of subjective well-being which encompasses a global evaluation of one's life, positive and rewarding affective responses to everyday circumstances of life, and the degree a respondent feels one's life is worthy (Bevans, personal communication, December 2012).

The EPOCH measure of adolescent well-being is a new measurement tool that has revised certain components of the PERMA model to be more developmentally-appropriate for adolescents (Kern, Steinberg, Steinberg, & Benson, 2013). The EPOCH is composed of five variables: Engagement, Perseverance, Optimism, Connectedness, and Happiness. Engagement refers to the capacity to become absorbed in and focused on what one is doing, as well as involvement and interest in life activities and tasks. Perseverance refers to the ability to pursue one's goals to completion, even in the face of obstacles. Optimism is characterized by hopefulness and confidence about the future, a tendency to take a favorable view of things, and an explanatory style marked by seeing negative events as temporary, external, and specific to a situation. Connectedness refers to the sense that one has satisfying relationships with others, believing one is cared for, loved, esteemed, and valued, and providing friendship or support to others. Happiness is consistent with the conventional use of the word, and includes positive emotions, positive mood, and a general feeling of being content with one's life.

The Positive and Negative Affect Schedule (PANAS) questionnaire (Watson, 1988) was developed to measure moods as a barometer of well-being. Moods are more long-lasting than emotions. To use a psychological term, moods are more trait-like in an individual whereas emotions are more fleeting or state-like (Peterson, 2006). PANAS measures positive affect through discreet sub-sets including Joviality (eight items comprise this positive affect including cheerful, happy, lively, and enthusiastic); self-assurance (six items comprise this subset including confident, strong, daring); attentiveness (four items are part of this subset including alert, concentrating, determined); and negativity (including irritable, bored, anxious, or depressed). Twenty items from the full PANAS measure were included in the current investigation.

Procedure

Appendix 3 summarizes the script and questions for the treatment and control groups. For the treatment group, the self-report questionnaires were administered bedside or in the pediatric playroom, family lounge, or outpatient clinic in a test battery that took approximately ten to fifteen minutes to complete. The person administering the questions was a hospital employee, trained Child Life professional, nurse or

hospital volunteer. The professionals recorded the answers so that the patient answered the questions orally. Participants answered the first series of questions and then were given a SoaringSuperhero message/artwork that was created by another child. After they accepted this gift, each patient was invited to participate in the creation of a Soaringwords superhero project to give to another patient or someone else. After they completed the project, they were asked to respond to a second series of questions that took about 10 to 15 minutes to answer. The entire process took 30 to 60 minutes and was completed in the same day, with no long-term follow up.

For the control group, self-report questionnaires were administered bedside or in the pediatric playroom, lounge or outpatient clinic in a test battery that took approximately 10 to 15 minutes to complete. Each participant answered the first questionnaire to provide a base line read on well-being and then was given a SoaringSuperhero message/artwork that was created by another hospitalized patient. Then the patient answered the second round of questions to determine the change in well-being as a result of receiving the “gift.” Patients in the control group were not invited to “pay it forward” and create a SoaringSuperhero message/artwork. Each round of questions took about 15 minutes and was completed in the same day with no follow up. The study was conducted between March 1, 2013 to June 30, 2013.

The patients completed a set of initial measures, including 20 questions asking a series of positive and negative emotions (e.g., calm, excited, sad, angry). The patients then went through the intervention protocol, receiving a message/artwork and then drawing a picture for another child. After completing the intervention, they answered the following question: “Now I’d like to ask you a few questions about how you are feeling **right now**. These are just like the questions you answered before the activity. You may feel the same way compared to how you felt before or you may feel differently now that you have made a superhero message/artwork for another child.”

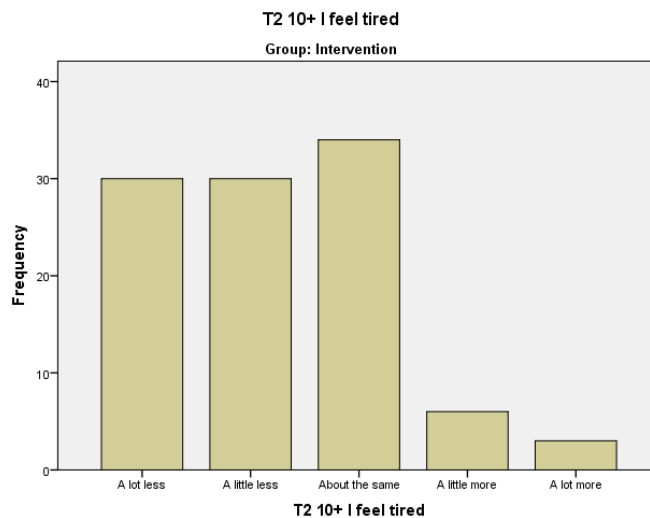
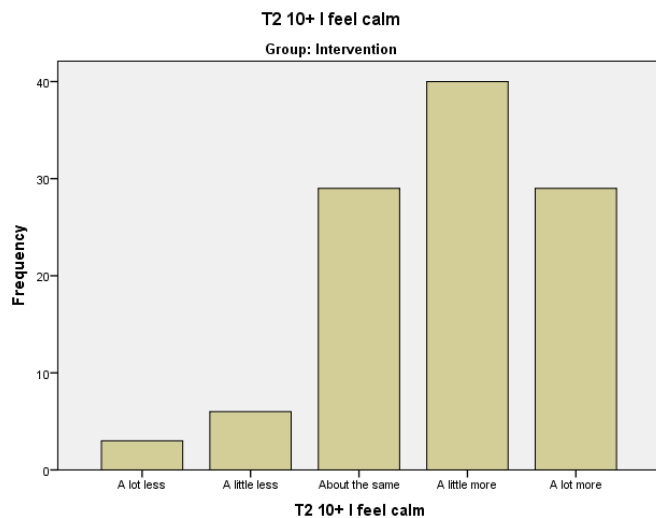
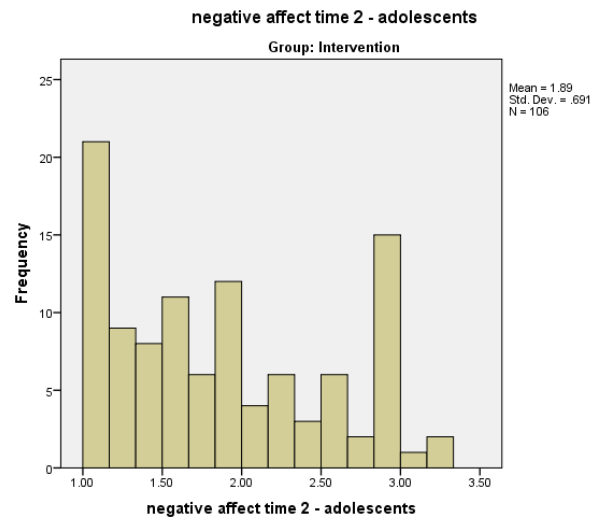
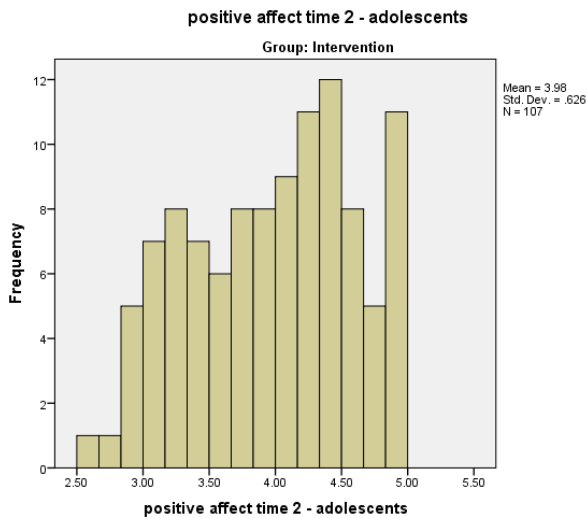
The child was then asked 20 emotion questions, indicating whether they felt less than the emotion, about the same, or more than before. Composite positive and negative affect scales were created (average of positive or negative emotions), and we examined the individual emotions.

Results

Does the Soaringwords full intervention increase positive emotions and decrease negative emotions?

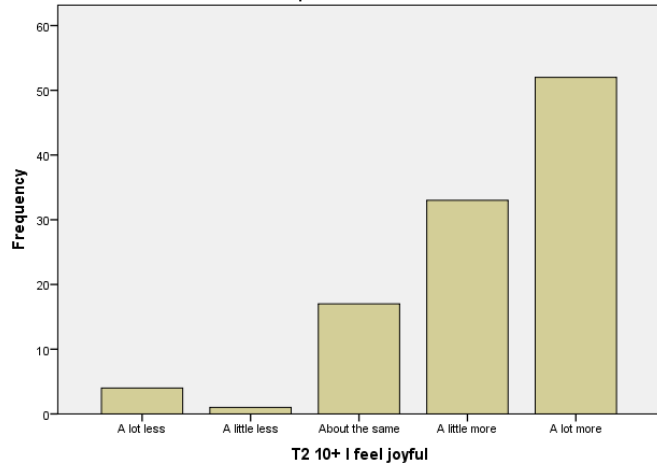
The graphs below illustrate responses. For the adolescents, questions were on a 5-point scale (1 = a lot less, 2 = a little less, 3 = about the same, 4 = a little more, 5 = a lot more). Children answered with a 3-point scale (1 = less than before, 2 = same as before, 3 = more than before). We see that across the board, the patients felt more positive emotions and fewer negative emotions.

Adolescents



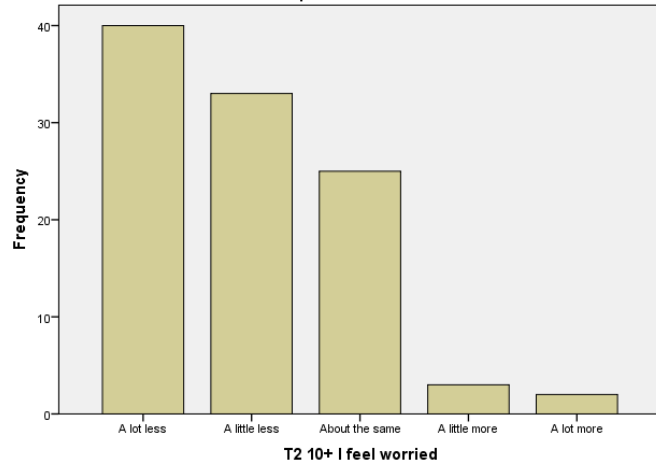
T2 10+ I feel joyful

Group: Intervention



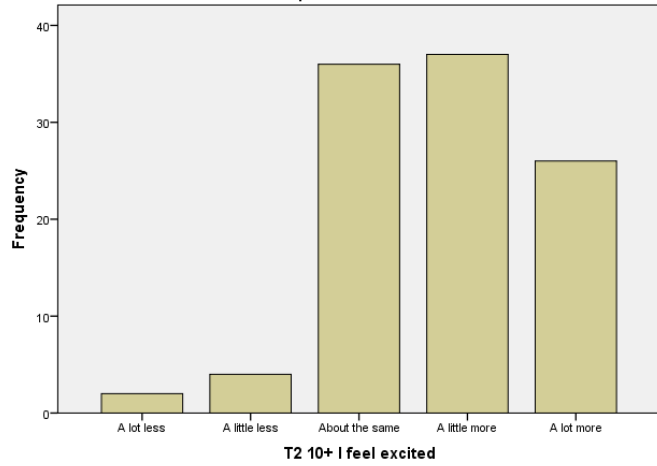
T2 10+ I feel worried

Group: Intervention



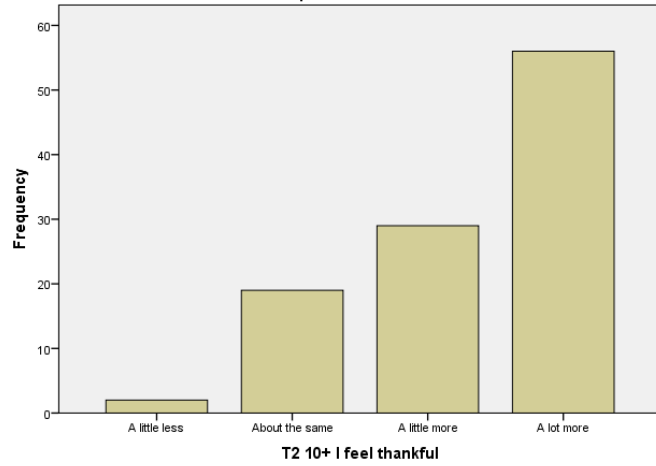
T2 10+ I feel excited

Group: Intervention



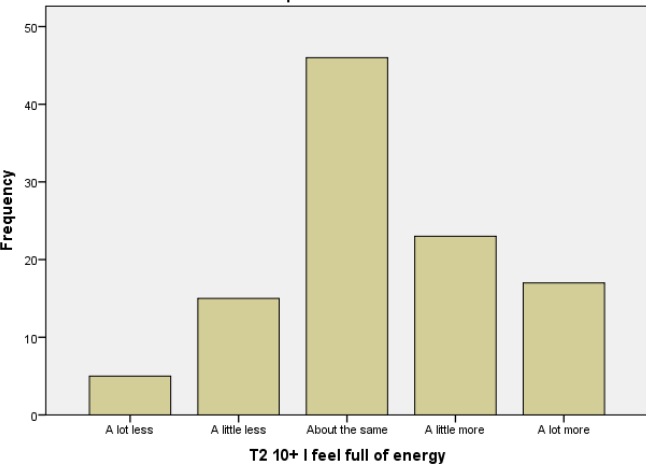
T2 10+ I feel thankful

Group: Intervention



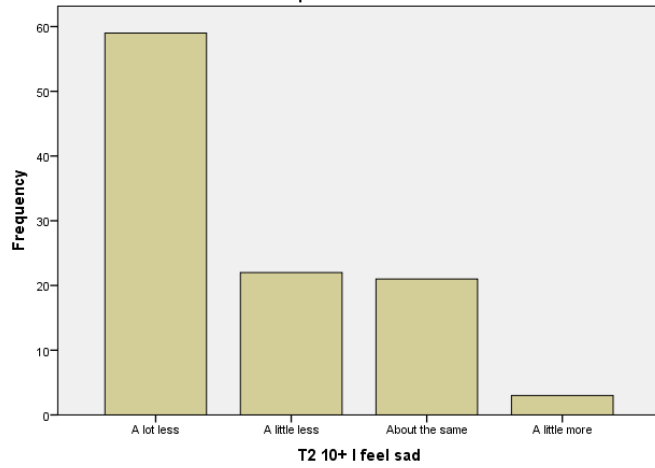
T2 10+ I feel full of energy

Group: Intervention



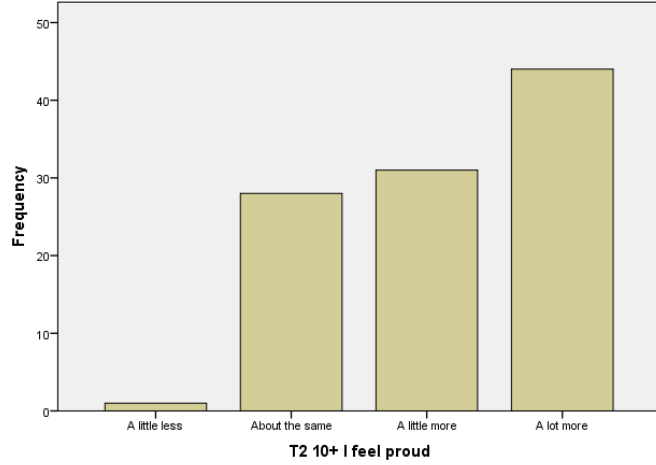
T2 10+ I feel sad

Group: Intervention



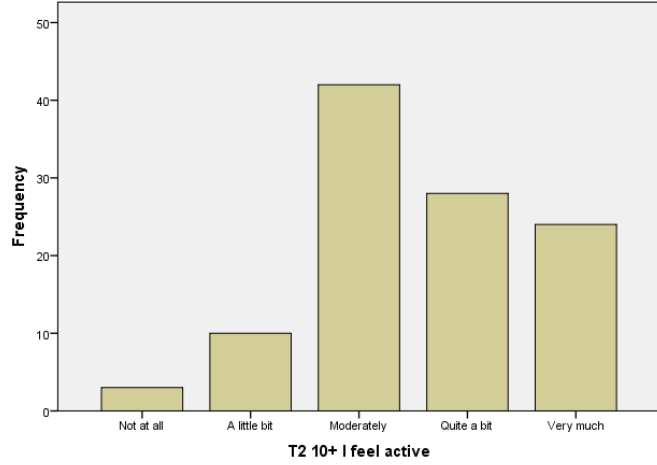
T2 10+ I feel proud

Group: Intervention



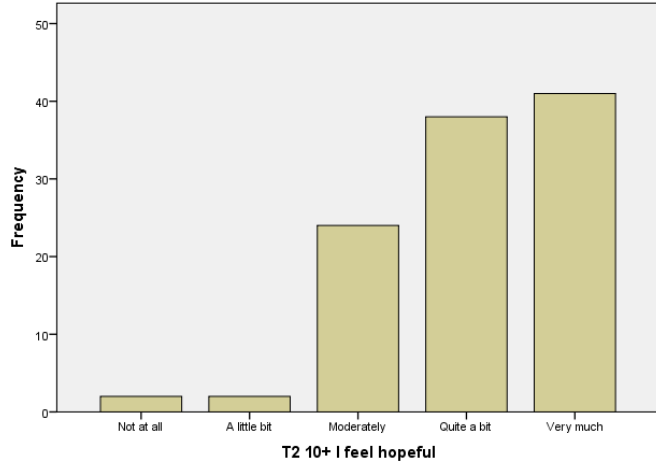
T2 10+ I feel active

Group: Intervention



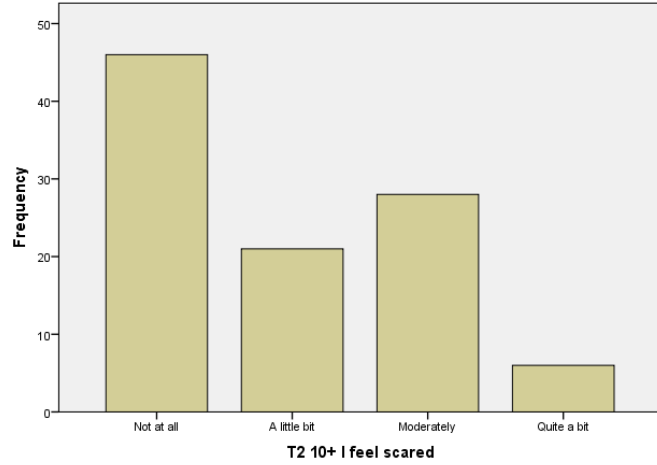
T2 10+ I feel hopeful

Group: Intervention



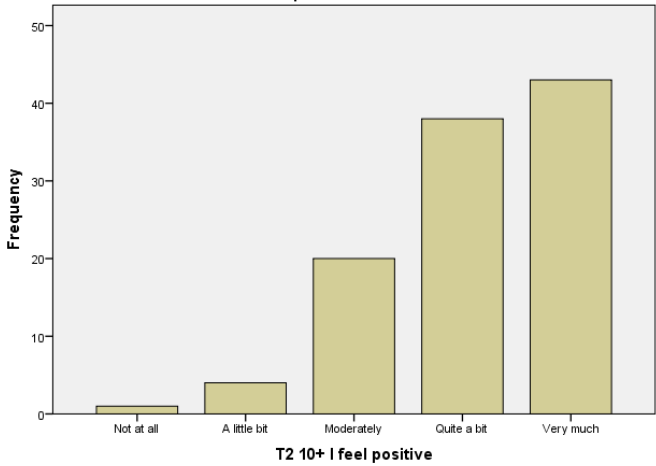
T2 10+ I feel scared

Group: Intervention



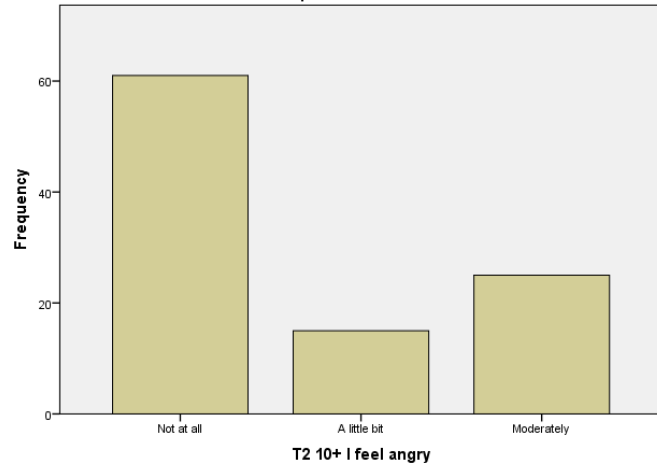
T2 10+ I feel positive

Group: Intervention



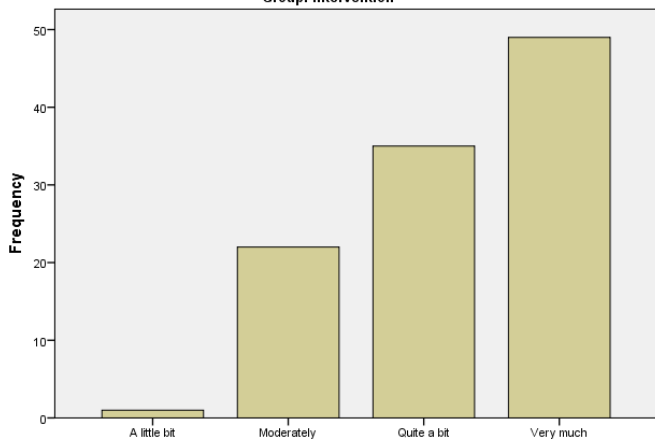
T2 10+ I feel angry

Group: Intervention



T2 10+ I feel appreciated

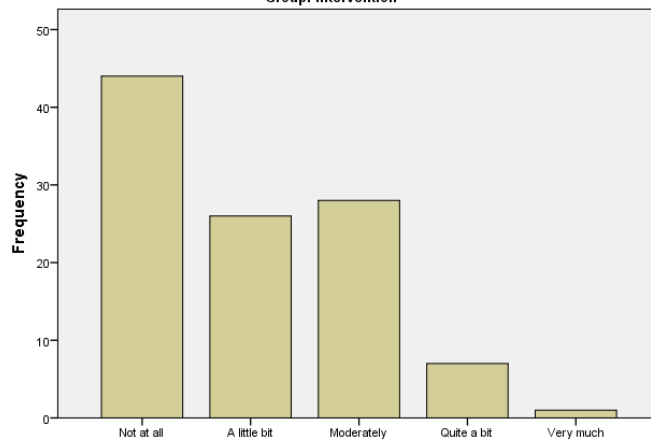
Group: Intervention



T2 10+ I feel appreciated

T2 10+ I feel nervous

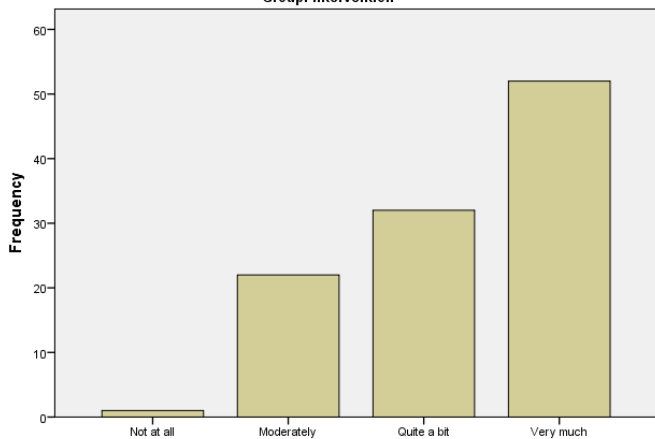
Group: Intervention



T2 10+ I feel nervous

T2 10+ I feel grateful

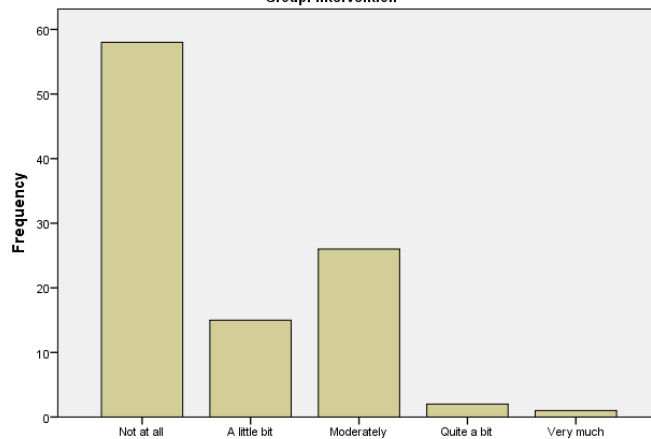
Group: Intervention



T2 10+ I feel grateful

T2 10+ I feel grouchy

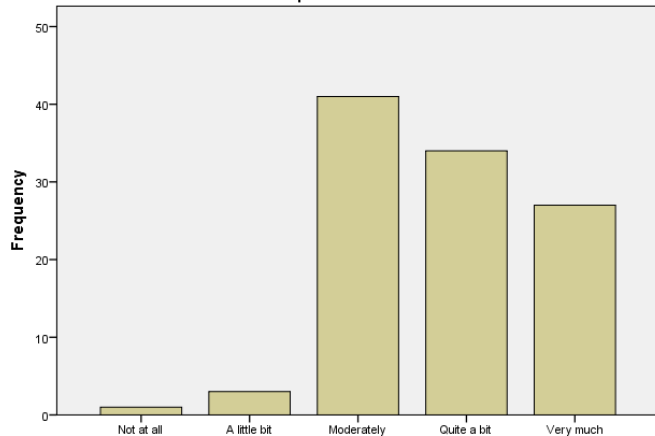
Group: Intervention



T2 10+ I feel grouchy

T2 10+ I feel strong

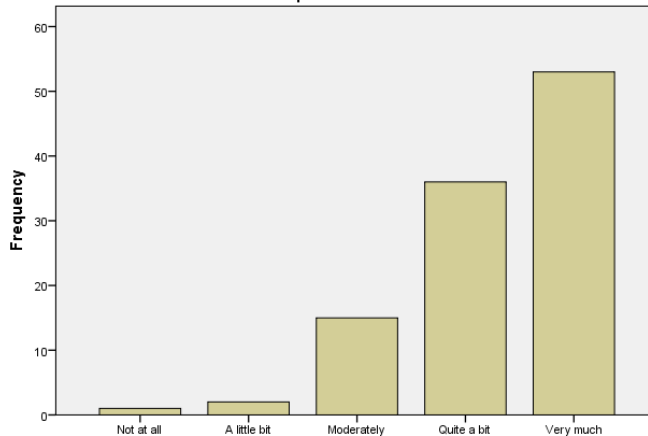
Group: Intervention



T2 10+ I feel strong

T2 10+ I feel happy

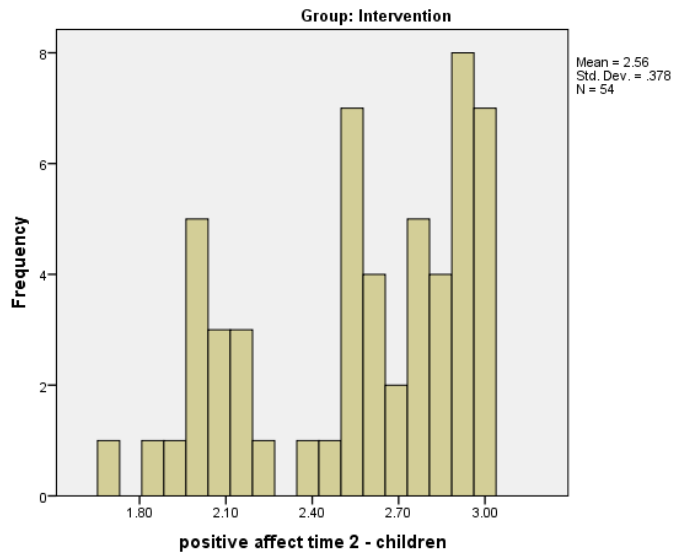
Group: Intervention



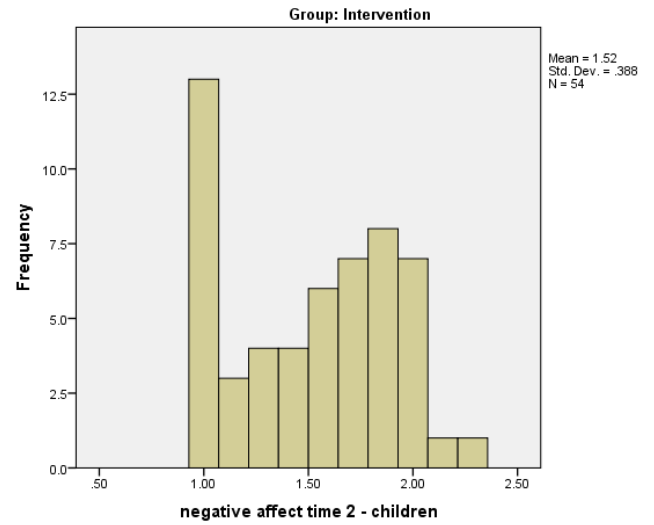
T2 10+ I feel happy

Children

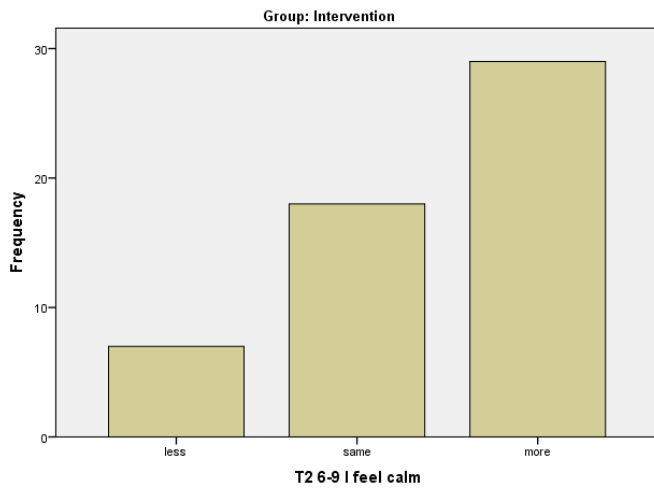
positive affect time 2 - children



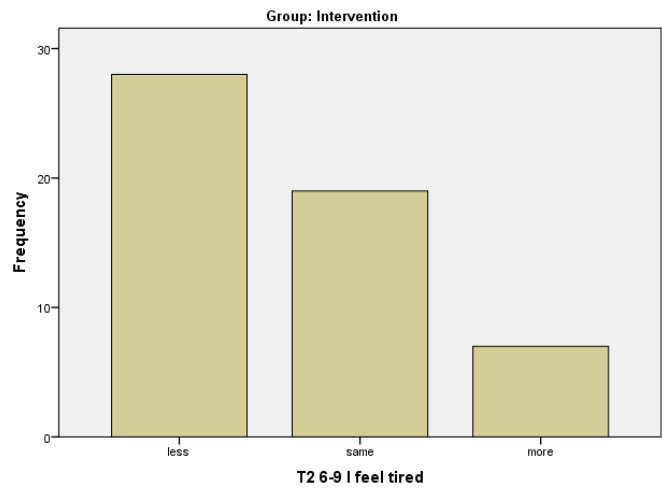
negative affect time 2 - children



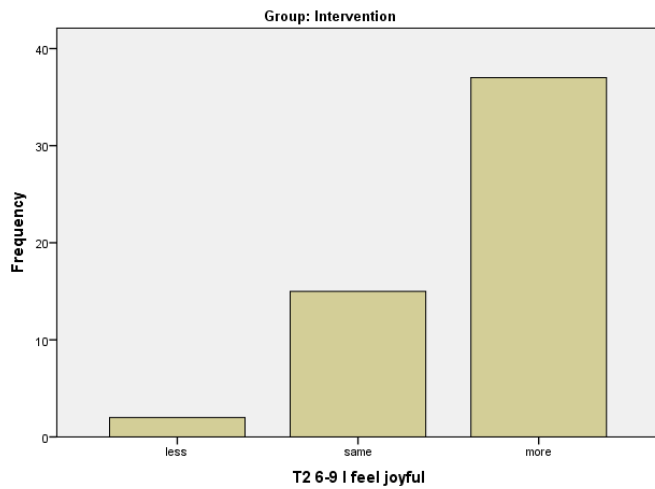
T2 6-9 I feel calm



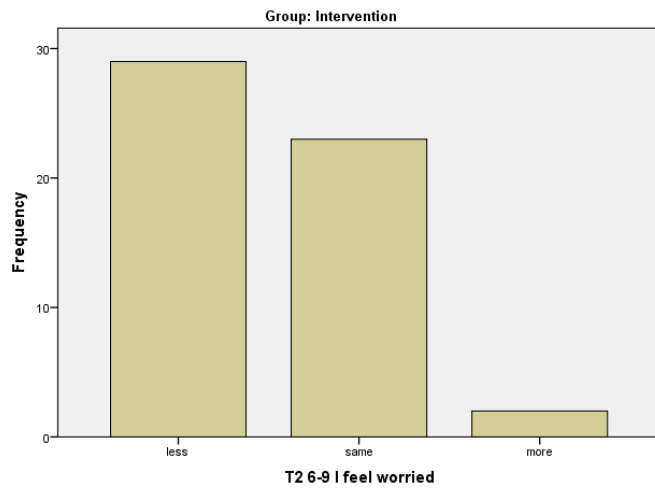
T2 6-9 I feel tired

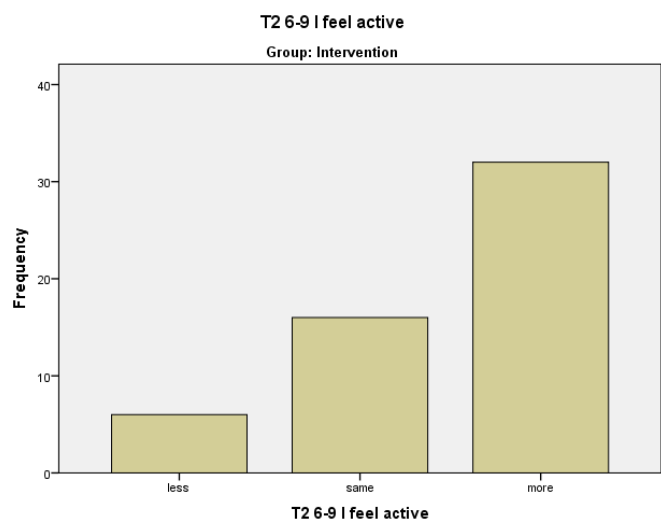
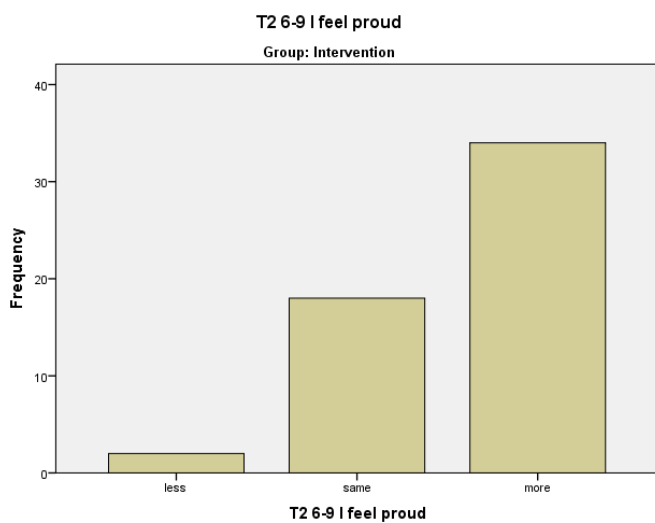
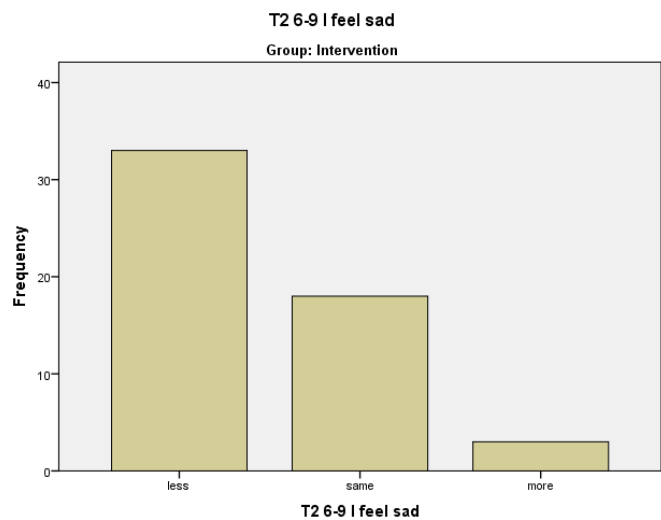
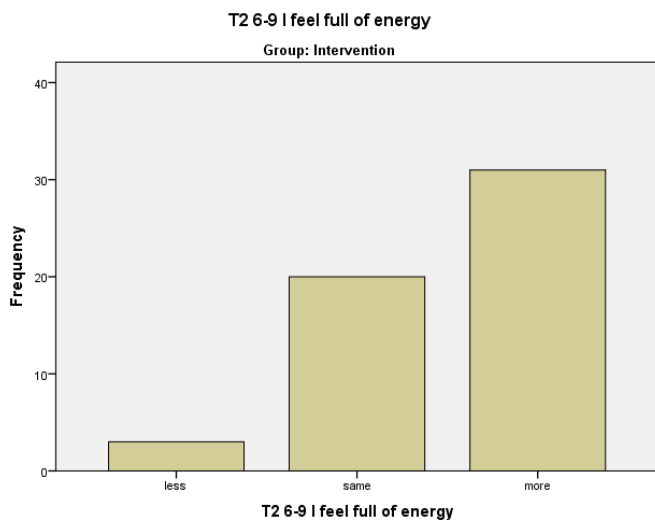
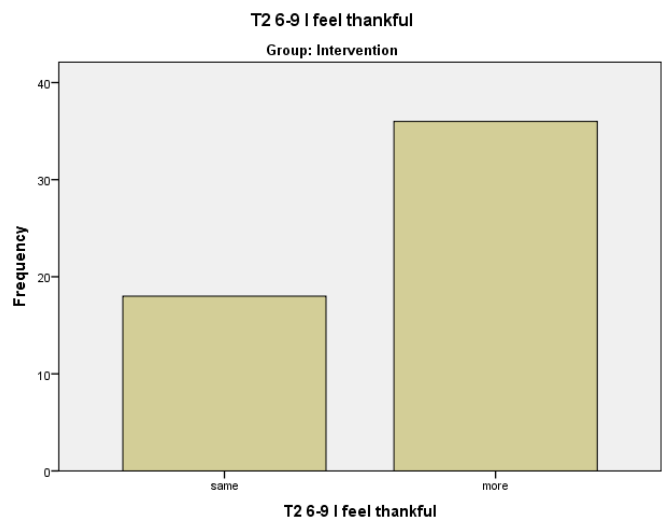
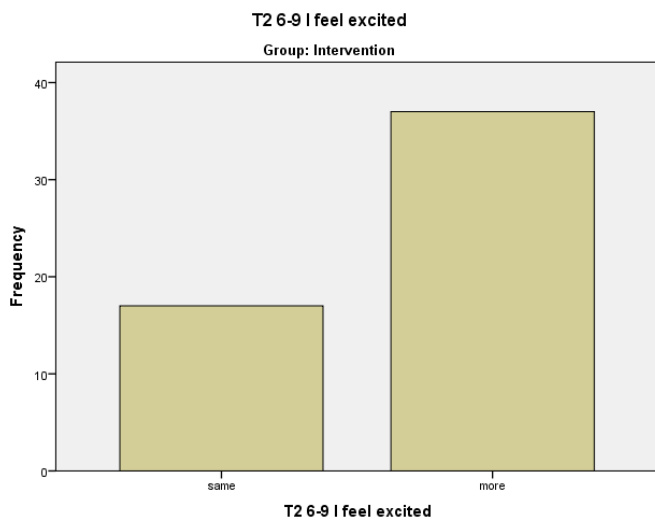


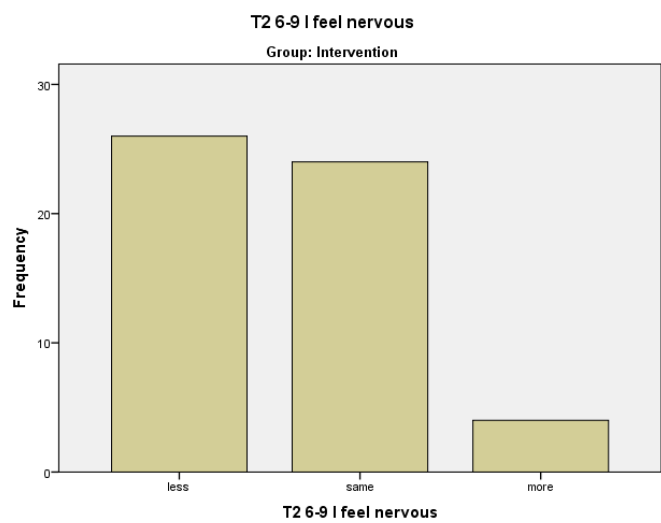
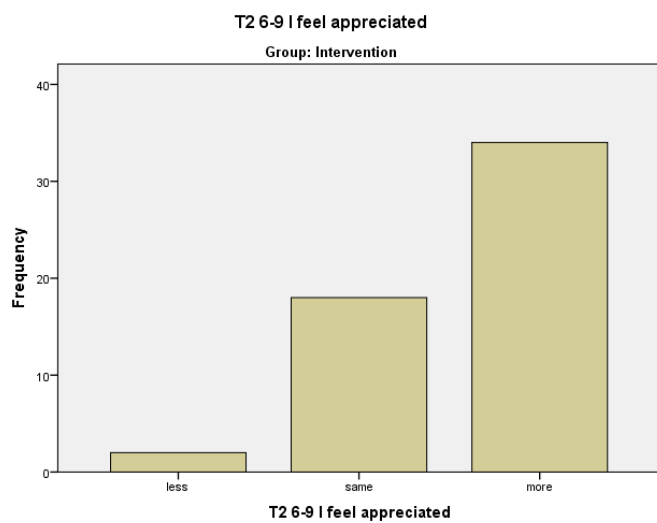
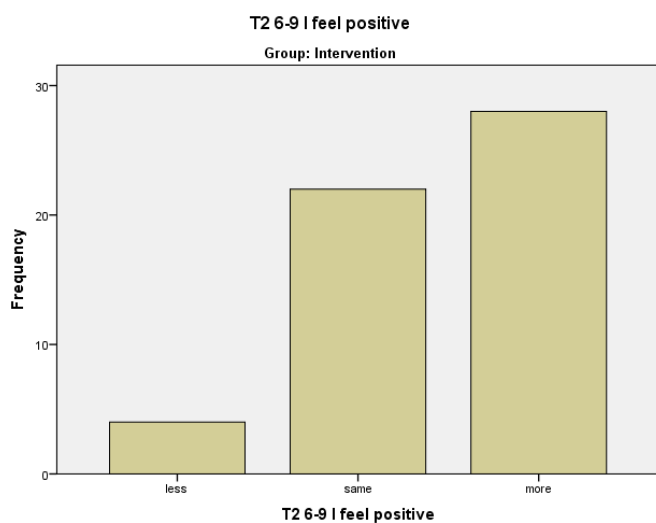
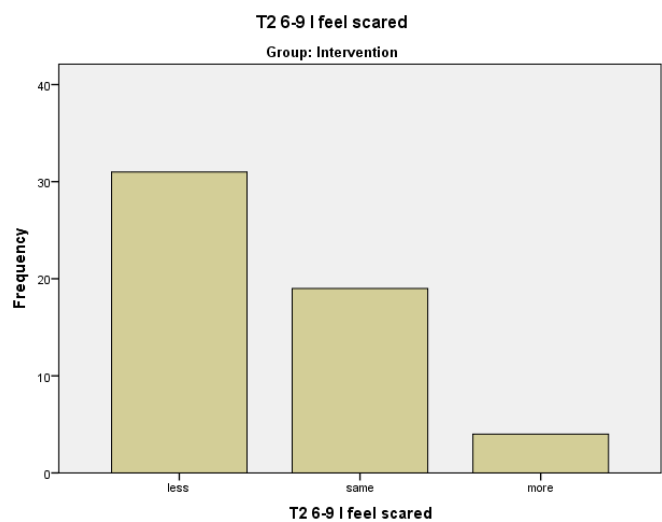
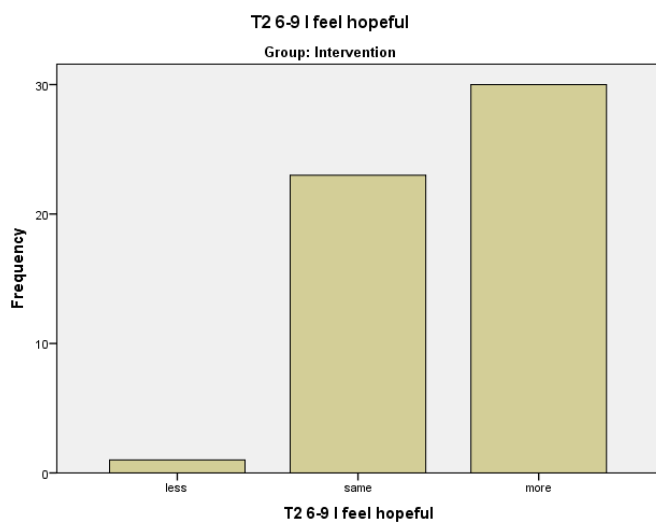
T2 6-9 I feel joyful

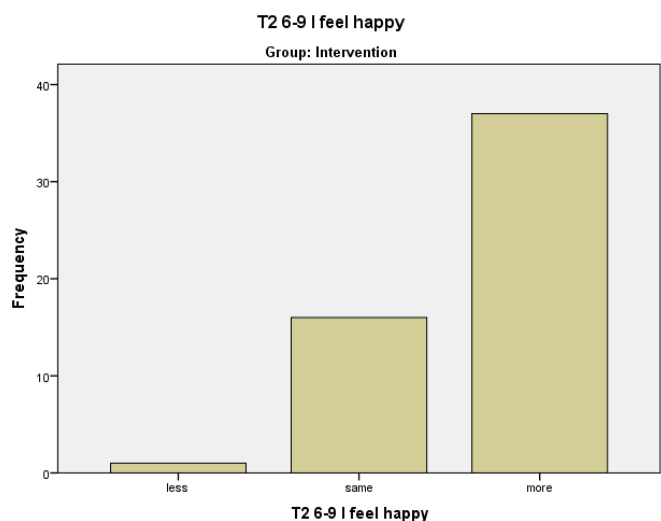
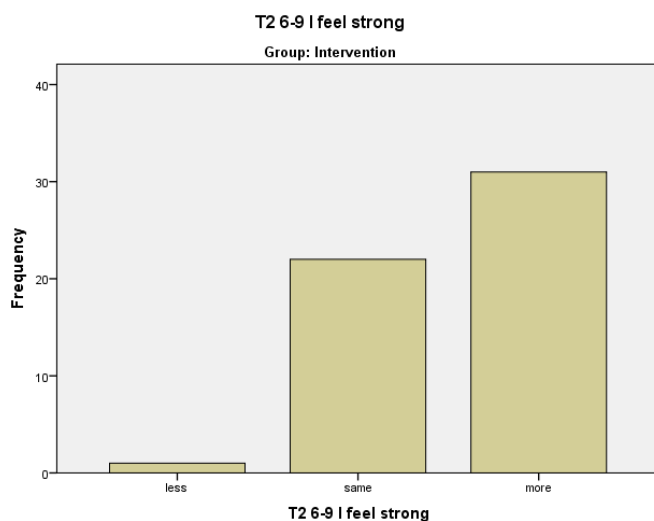
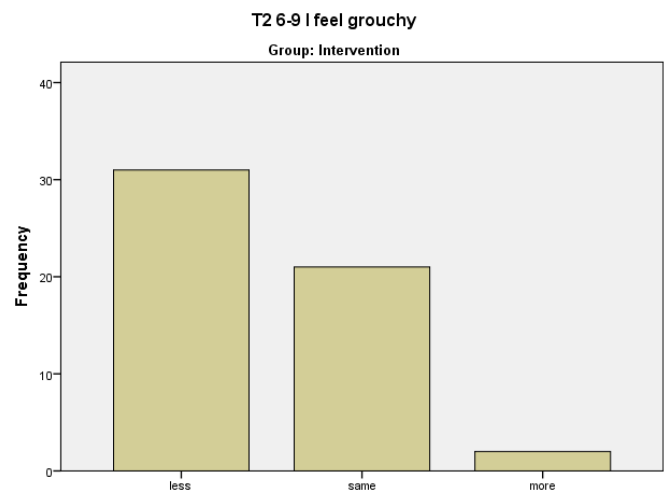
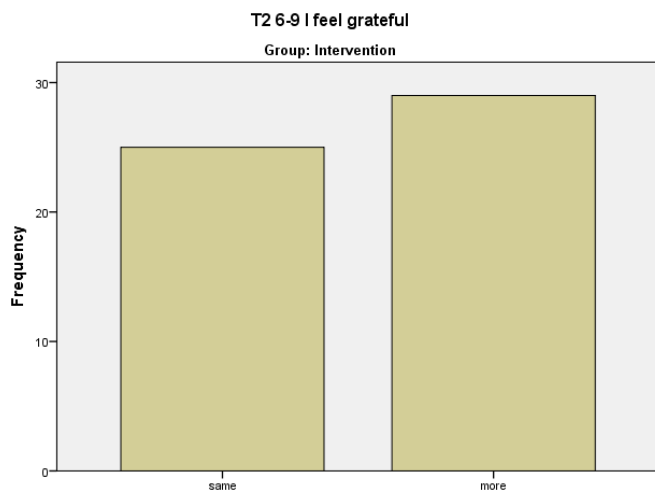


T2 6-9 I feel worried









The question is whether this is a significant improvement. We then conducted one sample t-tests, comparing whether there was significant improvement (i.e., less negative emotions, more positive emotions). In these analyses, for adolescents, 3 = same as before, so the t-test asks whether the average score (across participants) is significantly different from 3. For children, 2 = same as before, so the t-test asks whether the average score is significantly different from 2. The following tables give descriptive statistics and the t test. To be significant, the *p* value will be less than .05. We see that for every emotion, both adolescents and children were significantly more positive and less negative.

Adolescents

	Descriptives						Test for improvement (significantly>3)			
	N	Mean	Median	SD	Min	Max	T	df	p	Improve?
Positive Emotion	10 7	3.9 8	4.08	0.6 3	2.5 4	5.0 0	16.28	106	0.000	Y
Negative Emotion	10 6	1.8 9	1.71	0.6 9	1.0 0	3.2 9	-16.56	105	0.000	Y
Calm	10 7	3.8 0	4.00	1.0 0	1.0 0	5.0 0	8.36	106	0.000	Y
Tired	10 3	2.2 4	2.00	1.0 3	1.0 0	5.0 0	-7.44	102	0.000	Y
Joyful	10 7	4.2 0	4.00	1.0 0	1.0 0	5.0 0	12.44	106	0.000	Y
Worried	10 3	1.9 7	2.00	0.9 7	1.0 0	5.0 0	-10.83	102	0.000	Y
Excited	10 5	3.7 7	4.00	0.9 3	1.0 0	5.0 0	8.47	104	0.000	Y
Thankful	10 6	4.3 1	5.00	0.8 3	2.0 0	5.0 0	16.22	105	0.000	Y
Full of energy	10 6	3.3 0	3.00	1.0 5	1.0 0	5.0 0	2.95	105	0.004	Y
Sad	10 5	1.7 0	1.00	0.8 9	1.0 0	4.0 0	-15.03	104	0.000	Y
Proud	10 4	4.1 3	4.00	0.8 5	2.0 0	5.0 0	13.64	103	0.000	Y
Active	10 7	3.5 6	3.00	1.0 3	1.0 0	5.0 0	5.63	106	0.000	Y
Hopeful	10 7	4.0 7	4.00	0.9 2	1.0 0	5.0 0	11.93	106	0.000	Y
Scared	10 1	1.9 4	2.00	0.9 9	1.0 0	4.0 0	-10.78	100	0.000	Y
Positive	10 6	4.1 1	4.00	0.9 1	1.0 0	5.0 0	12.62	105	0.000	Y
Angry	10 1	1.6 4	1.00	0.8 6	1.0 0	3.0 0	-15.94	100	0.000	Y
Appreciated	10 7	4.2 3	4.00	0.8 1	2.0 0	5.0 0	15.80	106	0.000	Y
Nervous	10 6	2.0 1	2.00	1.0 2	1.0 0	5.0 0	-10.01	105	0.000	Y
Grateful	10 7	4.2 5	4.00	0.8 5	1.0 0	5.0 0	15.28	106	0.000	Y
Grouchy	10 2	1.7 5	1.00	0.9 7	1.0 0	5.0 0	-12.98	101	0.000	Y
Strong	10 6	3.7 8	4.00	0.8 9	1.0 0	5.0 0	9.01	105	0.000	Y
Happy	10 7	4.2 9	4.00	0.8 5	1.0 0	5.0 0	15.75	106	0.000	Y

Children

	Descriptives						Test for improvement (significantly >2)			
	N	Mean	Median	SD	Min	Max	T	df	P	Improve?
Positive Emotion	5 4	2.56	2.62	0.3 8	1.6 9	3.0 0	10.96	53	0.000	Y
Negative Emotion	5 4	1.52	1.57	0.3 9	1.0 0	2.2 9	-9.12	53	0.000	Y
Calm	5 4	2.41	3.00	0.7 1	1.0 0	3.0 0	4.19	53	0.000	Y
Tired	5 4	1.61	1.00	0.7 1	1.0 0	3.0 0	-4.02	53	0.000	Y
Joyful	5 4	2.65	3.00	0.5 6	1.0 0	3.0 0	8.59	53	0.000	Y
Worried	5 4	1.50	1.00	0.5 8	1.0 0	3.0 0	-6.39	53	0.000	Y
Excited	5 4	2.69	3.00	0.4 7	2.0 0	3.0 0	10.74	53	0.000	Y
Thankful	5 4	2.67	3.00	0.4 8	2.0 0	3.0 0	10.30	53	0.000	Y
Full of energy	5 4	2.52	3.00	0.6 1	1.0 0	3.0 0	6.29	53	0.000	Y
Sad	5 4	1.44	1.00	0.6 0	1.0 0	3.0 0	-6.76	53	0.000	Y
Proud	5 4	2.59	3.00	0.5 7	1.0 0	3.0 0	7.68	53	0.000	Y
Active	5 4	2.48	3.00	0.6 9	1.0 0	3.0 0	5.10	53	0.000	Y
Hopeful	5 4	2.54	3.00	0.5 4	1.0 0	3.0 0	7.32	53	0.000	Y
Scared	5 4	1.50	1.00	0.6 4	1.0 0	3.0 0	-5.77	53	0.000	Y
Positive	5 4	2.44	3.00	0.6 3	1.0 0	3.0 0	5.15	53	0.000	Y
Angry	5 4	1.52	1.00	0.6 4	1.0 0	3.0 0	-5.56	53	0.000	Y
Appreciated	5 4	2.59	3.00	0.5 7	1.0 0	3.0 0	7.68	53	0.000	Y
Nervous	5 4	1.59	2.00	0.6 3	1.0 0	3.0 0	-4.75	53	0.000	Y
Grateful	5 4	2.54	3.00	0.5 0	2.0 0	3.0 0	7.84	53	0.000	Y
Grouchy	5 4	1.46	1.00	0.5 7	1.0 0	3.0 0	-6.88	53	0.000	Y

	Descriptives						Test for improvement (significantly >2)			
	N	Mean	Median	SD	Min	Max	T	df	P	Improve?
Strong	5	2.56	3.00	0.5	1.0	3.0	7.59	53	0.000	Y
	4			4	0	0				
Happy	5	2.67	3.00	0.5	1.0	3.0	9.53	53	0.000	Y
	4			1	0	0				

Discussion

This empirical study was designed to enhance the field of positive psychology by empirically measuring the impact of a positive intervention on the well-being of pediatric patients. Often pediatric patients come from different cities, states, and countries to receive excellent care and/or specific treatment that may not be available in their hometown. The Soaringwords' positive intervention creates a direct and instant community, as the artifacts from each project surge through the social network in a pediatric hospital floor, creating a cohesive community as art is made by and for other patients. In this simple way, the Soaringwords' intervention has the potential to revitalize human connection and enhance patients' well-being.

PERMA Expressed as a Soaring Superhero

To better understand the relations evident in the quantitative analyses, I qualitatively examined all 220 completed artworks. Viewed through a positive psychology lens, PERMA and other well-being components appear, as discussed and illustrated below.

Positive affect

As noted in the introduction, a growing number of reviews and studies suggest that well-being influences health and longevity. For example, Chida and Steptoe's (2008) meta-analysis of 35 prospective studies examining the relationship between positive well-being and mortality in both healthy and diseased populations suggested that positive psychological well-being was related to lower mortality in both

populations, independent of negative affect. Diener and Chan (2011) reviewed 43 studies linking several different types of subjective well-being (e.g. life satisfaction, absence of negative emotions, optimism, positive emotions) to better health and longevity, and make a strong statement that there is sufficient evidence for a causal relation of well-being on physical health.

If such a conclusion is true, then it is important to find ways to increase positive affect and overall well-being. In the current study, the creation of a SoaringSuperhero message and artwork clearly engendered positive emotions, as patients thought about how the recipient would feel to receive the superhero they created. The results overwhelmingly found that the intervention helped boost their own positive affect. When inventing and selecting superpower attributes to endow upon the superhero, a child is likely to invent qualities and strengths they themselves may need. In the superhero drawings and messages, we see many examples of positive affect:

- A 12-year-old male patient said he felt helpful when he created **Happiness-bringer**, a jovial superhero with a large smile on his face to match the smile emblazoned on his crest. In the drawing, the sun is also smiling. The superhero message is *believe in yourself. Hoping to bring you happiness where ever you go.* (Appendix V-1).
- A 12-year-old girl made **Super Happy Hero**, with the message, *When you are feeling sad, this superhero will make you happy with his happy dust.* Her reaction to the activity was, “It was fun and it made me proud of myself to be doing this.” While she was sitting in the playroom, she proudly showed her superhero to all of the child life professionals, nurses and doctors, who then gave her lots of praise. (Appendix V-2).
- A 16-year old female noted: “This was very exciting. I feel like I am bringing joy to someone else’s life to make them happy. I thought that they would like ponies, because everyone likes ponies. I feel happy that I can make someone else happy.” After completing the superhero activity the youth said, “this is so making my day, this is awesome.” She created an equine superhero **Rainbow Dash**, with the message, *You are 20% cooler than you think you are.* (Appendix V-3). This wry humor is

especially appreciated amongst tweens and teenagers.

Sometimes just thinking about one's favorite superhero seemingly enhanced positive affect. Here are some examples of popular Superheroes that were created to bring smiles to the faces of patients.

- A 12-year-old boy patient created **Dr. Ali** (as in alligator). This is a cute and funny superhero with the message, *Hoping you have a stress-free good healthy life.* (Appendix V-4).
- A 14-year-old male was lying in bed playing a video game. He was groggy post-surgery. He agreed to participate in the survey and answered questions easily. "I'm not so good at drawing." He smiled when he got the **SuperMonkey** drawing. Then he made a superhero called **Fun Guy** with the message, *I hope to bring you fun and happiness with my cool outfit.* The patient visibly had an energy boost. "It was great to give them hope and stuff. It felt pretty cool." (Appendix V-5).

Engagement

In this study, I focused on the idea of flow, or very high levels of engagement. Flow can function as a powerful escape hatch to rise above negative circumstances (Csikzentmihalyi, 1990). In this way, offering therapeutic writing and art projects such as the SoaringSuperhero intervention to patients can similarly serve as an effective means to encourage flow, and thereby shift patients' focus away from pain and despair. When patients create Superhero projects to give to other patients, they engage in non-self-conscious individualism (Csikszentmihalyi, 1990). A significant benefit of these therapeutic flow-inducing interventions is that patients can lose a sense of time when they are engaged in fun and meaningful activities. Visualizations, meditation, and other healing modalities can provide additional flow experiences that build resilience.

A hospitalized child might experience greater well-being if he or she learns to cultivate flow in order to reduce the overwhelming negative barrage of emotions, procedures and pain that often comprise daily hospital life. Flow requires self-regulation (Csikzentmihalyi, 1990). Parents and child life professionals play significant roles in strengthening autotelic personality traits for hospitalized children that allow children to set goals for themselves. Teaching children how to

become more resilient while they are grappling with difficult physical and mental challenges can be an effective way to enhance patient well-being during serious illness (Favara-Scacco, Smirne, Schiliro, & Di Cataldo, 2001; Malchiodi, 1999; Waller, 2006).

The current study found evidence that the intervention helped the children to lose themselves in the activity. Immersion in the project can allow patients to forget about their suffering. When patients get completely absorbed in the activity, they tap into creativity, imagination, and self-expression and lose track of time, often experiencing flow (Csikszentmihalyi, 1990). The following superhero examples reflect the positive construct of engagement:

- An 11-year-old boy was so energized to draw his superhero, **Tiger Boxer**, with the message, *for justice and for all you must always defend yourself*, that he did not even look up as nurses came to hook him up to his chemotherapy treatment. He became talkative as time went on and became completely immersed in creating the artwork and message such that he did not look up when a volunteer was complimenting him on his project. When asked how the other child will feel to receive the gift, he said, “when he gets my message he is going to feel just like a superhero too!” (Appendix V-6).
- A six-year-old male made a **Power Ranger Superhero** for his older brother. Before the activity he was very withdrawn and did not make eye contact or show a lot of energy. After he received the **SuperMonkey** gift he got very excited and wanted to make more than one superhero. His doctor came into the room and said, “you look great. I haven’t seen you sitting up before!” The patient was smiling, nodding and making eye contact with the doctor, his mother and the researcher. There was a positive shift in his demeanor. (Appendix V-7).
- 7 year-old-boy made **Super Pig** with a cape and the message, *I save the world!* His mother thought he would not be able to focus on the survey questions or do the art project. However, he was very motivated and wanted to make sure that the researcher was going to give his superhero to a child who did not have one. (Appendix V-8).

Relationships

Pediatric patients require more positive interventions to stay connected to hope, love, and joy. For flourishing to occur, positive events must outpace negative events by a 3 to 1 ratio (Gable & Gosnell, 2011). For hospitalized children, it is difficult to maintain this ratio. Hospitalization is a traumatic experience for children as they are bombarded with invasive procedures, assaulted with sensory overload, and examined at all hours of the day and night by roving bands of medical professionals, residents, and attending physicians in white lab coats. When individuals give to others, research demonstrates that both the giver AND the receiver experience feelings of meaning and purpose (Seligman, 2011). Individuals who engage in compassionate acts experience more happiness and health (Post, 2005). Gable & Gosnell (2011) described this as a buffering model, wherein effective support mechanisms protect individuals from the negative effects in their lives. Cohen and Willis (1985) found support for the buffering model when social support was measured through the perceived availability of interpersonal resources.

The creation of a SoaringSuperhero connects a patient to other people, thereby reducing feelings of isolation. Patients are invited to create the superhero for another ill child, a nurse, an aide, parent, sibling, doctor or therapist, or a friend. This expands the child's perspective to acknowledge people around them in the hospital and realize that "other people matter" (Peterson, 2006). After the child creates his or her superhero to give to another person, an adult can reinforce positive feelings through Active and Constructive Responding (Gable & Gosnell, 2011), giving the child positive feedback to internalize positive emotions. The Child Life professional can extend feelings of relatedness by hanging the original SoaringSuperhero gift (e.g. SuperMonkey) that the patient received, as well as the superhero that the child created in the patient's room. At the same time, the Child Life professional makes a photocopy of their creation can be given to another patient. (The hospital professionals make a photocopy of the artwork that is being shared with patients to avoid the spread of germs). When people come into the patient's room, they can compliment the patient on his or her creativity, giving encouragement and support and giving the patient another positive relationship experience. Positive relationships can continue to be highlighted for the duration of the hospital

stay as people acknowledge the altruistic gift with positive statements that reinforce the fact that someone has done something thoughtful for the patient. The following SoaringSuperhero artifact demonstrates the power of relationships as a key aspect of well-being:

- **Best Friend Forever BFF** - this adorable confident superhero is the embodiment of the healing power of relationship. *BFF makes you feel remembered, important, cared-for and loved.* This 14-year-old female was eager to do the project. She had the idea to do BFF because her best friend visited her in the hospital just the day before. “I wanted to make something meaningful for other children. I hope my superhero makes children feel like they were thought of and that it will lift their spirits just like when you spend time with your best friend. This makes me feel proud of myself because I am making a difference in someone else’s life, like someone made a difference in my life.” (Appendix V-9).

A key component of relationships is social connection. Fowler and Christakis (2008), in their theory of the dynamic spread of happiness, suggest that happiness, like health, is a collective phenomenon. On a pediatric hospital floor, communication spreads through the social network, moving from one person to another in order to make patients and their parents feel loved and supported. The main effect model (Gable & Gosnell, 2011) posits that successful social support has a direct impact on well-being. Patients are capable of moving beyond the confines of their new limited identity and routines and can learn to function outside of their normal ecosystem of home, school, and friends. In this “new normal” environment, pediatric patients can be encouraged to express themselves to cultivate new positive relationships.

There were many examples where patients recognized real life heroes such as a nurse, parents, siblings, or public figures. The SoaringSuperhero activity is also a powerful way for patients to experience the social benefits of relationships by enjoying the creation of the superhero project with another person. Lastly, based on testimonials and observed behaviors of hundreds of family members and hospital staff, the activity has a visible and powerful impact on enhancing the patients’ well-being as reflected in the examples below.

- 9-year-old male patient chose to make a superhero in honor of **Pat**, his nurse. The message is, *thank you for helping me and letting me go to the playroom.* This activity gave the patient the ability to express his gratitude to his nurse. After nurse Pat received the gift, she came back into the patient's room, holding the gift to her chest and said, "this absolutely made my day!" (Appendix V-10).
- A 17-year-old developmentally delayed male made a Superhero message for his brother, **Emmanuel**. The message is, *I miss you so much, you are the best brother I ever had. And you are my brother. I hope that you like my picture.* This activity gave the patient the opportunity to express his feelings of love and gratitude for his brother. (Appendix V-11).
- Positive impact on the whole family -- A 54-year-old mother of a 14-year-old male patient was so moved by the project that she wanted to participate in the activity even though she knew that her survey would not be formally counted. She filled out a complete survey and then created a superhero message to be shared on the Soaringwords.org website. "Being part of this activity made me feel fortunate and happy to help another hospitalized child, other than my son. The highest form of wisdom is kindness. As we share our creations we are overcoming sickness and sadness, it is a process for all of us -- the ill and the healthy." She created **Look to the Future Girl** and this superhero message is, *I want to share my vision of the future with you. I can always see that no matter how hard times are, they always let up. So we must always hang on for better times.* (Appendix V-12).
- A 17-year-old female patient made **Ms. Happy** in the shape of a heart. The message is, *always be happy, no matter what. You are very special.* This patient was in isolation and was taken for a procedure the first day the researcher approached her to participate in the study. At the time, the patient was too ill to make the art project. The next day, when the researcher returned the patient said, "I am so happy that you came back." After the activity, she said, "Doing this was awesome! It makes me feel happy, positive and trusting. I trust that everything is going to be okay." (Appendix V-13).

Meaning

When pediatric patients are invited to create messages and artwork infused with compassion it reminds them of their core essence and adds a sense of meaning to their day. Heine, Proulx, and Vohs (2006) define comprehension as the understanding we develop of who we are, what the world is like, and how we relate to the grand scheme of things. The second dimension of meaning is purpose, defined as one or more overarching, long-term aspirations that are self-concordant and motivate relevant activity (Steger, Sheline, Merriman, & Kashdan, 2012). Goals are most beneficial when they align with the cognitive component of one's life. The cognitive component of meaning provides the springboard for the motivational component (Steger, 2012).

When a patient is encouraged to create a SoaringSuperhero message and artwork for another patient, it connects them to something larger than themselves. Laura King's book, *There Are Signs Everywhere* (in-press) explores the perception of meaning and the notion that something exists behind the veil of randomness. Moments of meaning surround us -- sometimes we notice them, sometimes they happen to us, sometimes we create them. Furthermore, meaning in life emerges from detection of pattern and coherence. The experience of these factors has been empirically tested to add meaning to human experience (Heintzelman, Trent, & King, 2013). Further, concern about the welfare of others is stimulated through the act of making something for someone else (Ryff, 1989). Such empathy may elevate the hospitalized child, who is the "giver", and makes him or her feel special, needed, and important, while also providing the child with a sense of meaning. The following superhero examples reflect patients' expression of meaning:

- Although not a superhero, this **Key to the World** artwork demonstrates the attributes of meaning. It features images of a key, open door, heart for love, helping hands, book for knowledge, with the message, *The Key to the World will open to you if you help, care and love and use your knowledge. This is the way to the world. Use it.* This 11-year-old female patient is from Bangladesh, far from her home. "I felt like I made someone feel appreciated like I felt doing this project. All of the messages I tried to send – have hope, believe in yourself, and love the world around you – will help another

person feel appreciated. I think they will see the world in a different perspective to be more positive, to try more, and to help someone else. It makes me feel like I am in a better place.” (Appendix V-14).

- A 16-year old female was nervous as she waited for the results of her MRI, EKG, and CAT-scan procedures. She made a **Blooming Hope** superhero message and artwork, with the message, *Hope that you will get better. Hoping that you are going to be okay. Hoping that you are strong, just like the roots of this flower.* This superhero activity seemed to transfer her fear into a positive message of hope for herself and others. As she so eloquently stated, “I need this message too but since I have it up here [she pointed to her head] please give it to another patient who needs hope.” (Appendix V-15).

Accomplishment

When patients persist on accomplishing a task with determination and grit it can give them a tremendous sense of control, as illustrated in the following:

- A six-year-old girl patient made **SuperUnicorn and Princess Unicorn** with her own special day-glow markers. The patient exhibited a lot of grit as she persisted to work on this project over several days while she was moved from a regular pediatric unit to the pediatric intensive care unit. The message demonstrates her strength, courage and persistence: *Don't be scared, everything will be okay. Your guardian angel is watching over you.* (Appendix V-16).

Gable, Reis, Impett, and Asher's Active Constructive Responding (ACR) style (2004) is a way for parents and healthcare professionals to accentuate the positive efforts that a child puts into his or her SoaringSuperhero message and artwork rather than focusing on something that may not be going well at the time or having a neutral or negative response to the activity such as, “you should have used a different color when drawing the cape!” When parents and healthcare professionals incorporate Active Constructive Responding, it gives them ample opportunity to praise a child on how brave they were during a procedure, congratulate a patient when he walks five additional steps than the day before, and celebrate when a patient sits up in her bed for the first time. These micro-moments of recognizing and celebrating accomplishments give patients and families the ability to appreciate the small accomplishments that might otherwise go

undetected. Thus a heightened sense of accomplishment actually energizes patients and enables them to persevere.

Patients experience tremendous pride and a sense of accomplishment when they do something kind for someone else. This positive intervention gives ill children a sense of mastery and control that is especially beneficial in a hospital environment (Ryff, 1989). The intervention allows parents and healthcare professionals to acknowledge the child, reinforcing feelings of success (Gable and Gosnell, 2011). This Soaringwords' experience may be the only time during hospitalization where a pediatric patient is called upon to do something for someone else, rather than simply being the recipient of treatment and care. The following superhero artifacts embody patients' sense of accomplishment:

- A creative 8-year-old male patient made a superhero called **Harry Porker**, conflating Harry Potter and the pig from Angry Birds. His green pig has the distinctive Harry Potter signature lightning bolt on his forehead. His humorous message for hospitalized children is, *Hoping for pork magic and pig fun! Have a magical day! P.S. Don't run into the angry birds!*" His mother said, "doing this makes a huge difference. There is only so much reading to him and TV watching we can do in one day. This takes his mind off his pain and boredom, which is great, even if it helps for ten minutes. He feels so proud of what he has made and can't wait for the other patient to get his superhero." (Appendix V-17).
- 14-year-old male made a **SuperStar** message and artwork, "this made me feel great and useful too." My message is: *You soar into the night sky, with you there is hope that you will shine for a million years, never giving up.* (Appendix V-18).

Additional Positive Psychology Constructs

Beyond PERMA, several other themes emerged in the superhero artifacts including hope, strength and resilience, agency, health, and fostering self-expression among introverted patients. Each one of these themes is illustrated through the Superhero examples below.

Hope

Hope is a construct where people believe that the future can be better than the present or the past and who are looking for a way to make it so (Lopez, 2013). Hope is active, where wishing is more passive. According to Lopez (2013), hope matters, hope is a choice, hope can be learned, and hope is contagious. The following artifacts are infused with hope for others.

- “The name of my superhero is **HOPE**”. This 16-year-old female was in isolation and was happy to have company to complete the survey and engage in the superhero activity. Her superhero message is *with every door that closes a new one opens- from a caterpillar to a butterfly, hope springs*. The patient said, “it feels nice to do something so nice for someone else.” (Appendix V-19).
- **LCC (Love, confidence and caring)** was created by a 13-year-old female. Her message is *fill your heart with love, confidence and care. No matter how bad things get, and no matter who causes it, there is always hope. Enjoy it*. The patient explained that “other people are going through hard times and the drawing I made will give them confidence to go LCC! With love, confidence and caring when you are positive good things will happen. This makes me feel appreciated. I know that I can give something to someone else that they need and don’t have. People who have it rough can take these three things and turn negative into positive, which is great.” (Appendix V-20).

Strength/Resilience

Patients exhibited strength and resilience in completing the individual superhero messages and artwork, often under extreme medical challenges. Other times the superhero message and artwork reflected aspirational strong and resilient qualities:

- **Athletic man** was invented by a 14-year-old boy. The message is *Never quit whether you are winning or losing, always do your best*. (Appendix V-21).
- **Ayudame** means “I help myself” in Spanish. A 15-year-old male created this superhero, depicted standing in a power pose with both hands on his hips, and a reassuring message designed to inspire confidence in the recipient, *Stay strong and you will get through anything*. The patient’s grandmother was sitting by his bedside as the patient said, “it was nice to help someone else out.

Maybe he'll feel a little more confident and happier when he gets my superhero. This makes me feel happy.” (Appendix V-22).

Agency

Often times the act of making the superhero message and artwork gave the patients a sense of agency and control. The positive intervention of making a SoaringSuperhero message and artwork for another person enhanced agency, which can be defined as the motivational component of hope theory, and the perceived ability to use pathways to reach a desired goal (Lopez & Synder, 2009). Agency reflects the intention to act rather than simply the perceived ability to do so. When patients were invited to invent, create, and draw unique superhero attributes to share with another patient, it gave the recipients a sense of control and power. Here are some of the most empathetic, compassionate, and agentic messages written to inspire another child:

- **Cape Dude** was made by a 14-year-old male. “This was a good deed, a mitzvah to do for another kid. I think they will feel empowered and less alone when they get it. It makes me feel empowered to make a difference in the world. When you share with someone you concentrate on the bigger picture so your own problems can seem smaller. The message *is just like Cape Dude overcomes evil, so you too can overcome your sickness.* (Appendix V-23).
- A 14-year-old boy created **Add-Man**, an ebullient animated plus-sign with the message, *Add some happiness in your life and soon enough you shall be healthy once more. Adding may also “subtract” pain.* This superhero is agentic in the way that the patient amplified well-being and mitigated suffering. (Appendix V-24).
- A 14-year-old male patient invented **Zach the great**, who proclaims, *I am Zach the great and I bring happiness to people all over the world.* It is obvious that this activity was inspiring and brought a sense of strength and control to him and to others. (Appendix V-25).

Healthy Choices

Many of the patients used the activity as an opportunity to create superheroes that reflected healthy

choices. This suggests that the patients were hoping that the recipients would make healthier choices in their lives as a means of getting stronger.

- The **Orange Princess** superhero was made by a 9-year-old female. Her message is *when children are sick, Orange Princess puts her ingredients into orange juice to make them feel better.* (Appendix V-26).
- A 12-year-old boy created **Cancer Man** with a powerful message *I will not rest until all cancer cells die and cancer will cease to exist.* This somatic activity allowed the patient to express his hopes to eradicate cancer that had led to the death of his uncle a few months earlier. It also gave him the opportunity to do something altruistic for another patient. (Appendix V-27).

Fostering Self-Expression

During hospitalization, children are separated from daily routines of their pre-hospital lives, such as connecting with friends and classmates and spending leisure time with their families. All of these disorienting factors can make pediatric patients feel more self-conscious and withdrawn, which can lead to diminished self-expression. The surprise of receiving a message/artwork filled with inspiring, upbeat sentiments and the invitation to create a message/artwork for another person fostered enhanced self-expression among patients, as expressed in the following:

- An 8-year-old girl created **SuperGirl** for her roommate, who was having a surgical procedure at the time. The message is compassionate and intimate, most likely something that an 8-year-old patient would not verbalize to another child. Creating the Superhero message gives patients an opportunity to express tender sentiments to others. *I hope I can fill your heart with love and sweetness. I hope I can make you feel better.* “I feel proud that I made this for someone else. It makes me feel very happy and generous that I made a superhero for my roommate.” (Appendix V-28).

The Positive Power of Art and Creativity

Artwork and creative expression potentially has the power to bring people together and enhance eudemonia on an individual and communal level (Forgeard & Eichner, in press). Eudaimonia is defined as

happiness or human flourishing that depends on an individual's reason or choices (Pawelski & Moores, 2013). Art provides an "escape from" troubling times as well as an "escape into" something transcendent (Pawelski, personal communication, 2013). Art can provide a refuge from troubling circumstances such as serious illness or trauma. The patient can focus on creating an art project and superhero message for another ill child or another person, and, in this way, she can lose herself in the activity, experiencing a brief period of flow (Csikszentmihalyi, 1990). When pediatric patients make art together as they often do in weekly Soaringwords programs in pediatric playrooms, they can laugh and play as they invent creative ideas for the superheroes or other "gifts" they donate to other patients. This playful interaction and the act of telling stories to someone about something (Kearney, 2002) can allow patients to transcend suffering and build connection and empathy. Empathy fosters a sense of community in the hospital, as it can literally transform the child as well as the hospital environment. The opportunity for sharing a simple altruistic gesture of humanity elevates the giver and the receiver (Grant, 2013). Receiving a superhero message from someone else and then being invited to create a Superhero for another child can generate a forward-motion or a virtuous cycle of altruism and reciprocity. Well-meaning, thoughtful expressions of compassion and empathy can facilitate growth that allows patients to experience a heightened purpose within life (Haidt, 2006).

I like to think of a white or grey wall in a hospital room as an opportunity to create a communal art space that will enhance flourishing for everyone who comes in contact with the environment. Specifically, as each person enters a patient's room he or she can comment on the superhero artwork the patient has received and/or made and can also make a contribution to the gallery walls of the hospital. In this way, each person coming into a patient's room has the opportunity to participate in the healing process in profound ways. This insight was measured in studies on hospital workers who perceive themselves as healers, not janitors. Many of these workers felt that sharing kind words and smiles with all of the patients would reduce the isolation of patients and family members and increase their sense of connection and well-being (Wrzesniewski, Dutton, & Debebe, 2003).

Soaringwords positive interventions such as the SoaringSuperhero have materiality (Dutton, 2013), as the SoaringSuperheroes are tangible, tactile artifacts bringing color, warmth, and creativity to brighten the hospital environment. Fredrickson (2013) talks about positivity resonance, which is defined as a reflection that amplifies the positive emotion, momentarily expanding awareness and boosting IQ and wisdom. Soaringwords positive interventions use the connective power of creativity through artwork and writing to engage patients and families and bring them together around a metaphorical hospital campfire or town-square. In this way, Soaringwords art projects potentially enhance flourishing and may become a starting place for building a healing community.

Study Limitations

As with any empirical research, there were numerous limitations in the current study. Some of the younger respondents found the survey instrument too long. We are reformatting the questionnaire to be much shorter for subsequent studies. Many of our hospital partners had to drop out of the study because of staffing constraints; we believe a shorter survey instrument will enable more of our hospital partners to participate in future research collaborations with Soaringwords. Also, this Capstone measured the immediate emotional response after the intervention, further study is necessary to access long-term impact, or the impact of well-being on health.

Future Endeavors

The study presented here is only the first step in demonstrating and building the power of the Soaringwords interventions with empirical research. In the Summer and Fall, I will be expanding the Soaringwords empirical study to other hospitals throughout North America and in other countries. I will also begin testing the efficacy of other Soaringwords positive interventions (e.g. SoaringVisualizations®, SoaringHaikus®, SoaringHugs®) on patient well-being. In addition, I will begin to measure the well-being of employee volunteers and students who participate in Soaringwords initiatives to benefit hospitalized children. Whereas in the past, we have only considered qualitative reports on the experience, building upon

the findings reported here, I will incorporate quantitative assessments, documenting the impact of the intervention.

Conclusion: Introduction of the SOAR construct

Human resilience -- the capacity to prevail in the face of difficulty -- is a measure of heightened well-being (Ryff & Singer, 2002b). When hospitalized children flourish in light of significant challenges and adversity, it may broaden and build positive emotions, positive social relationships, and overall resilience (Fredrickson, 2009). Barbara Fredrickson (2013) defines love as a micro-moment of warmth and connection that is shared with another human being. This powerful positive emotion blurs the boundaries between self and others, therefore creating a sense of oneness and connection that is a renewable resource to enhance well-being and the well-being of others (2013). The SoaringSuperhero® intervention is designed to inspire pediatric patients to don their superhero capes in order to do something tangible to inspire other ill children. The highly creative nature of this intervention cultivates strong person-activity fit as patients create superheroes that reflect individual thoughts, feelings and values. Persistence and focus toward the specific goal of wanting to cheer another child or another person ends up allowing both the maker of the superhero and the recipient of the superhero to soar to new heights of PERMA, strength, agency, and reciprocity.

Healing often happens in small increments and can be facilitated through a process called capitalization -- sharing good news with others as a way to savor experiences while building personal and interpersonal resources (Langston, 1994; Smith & Reis, 2011). In a pediatric hospital, progress often occurs gradually -- when a child is able to move from liquid to solid food, being able to sit up for ten more minutes in a chair, being able to walk from the bed to the washroom using a walker, or being able to make a SoaringSuperhero message to cheer another patient. These small acts of tremendous pediatric heroism, stamina, and faith are dutifully accomplished by patients, witnessed by family and professional staff, and then reported out to close friends and relatives, professional staff, and relatives of other patients. In this way,

each child's heart is tethered through invisible iridescent threads to the hearts of his or her parents, the other patients and parents on the ward, and all of the medical professionals devoted to his or her care.

Bringing together the empirical findings of my Capstone study, my experiences working with hospitalized children and families these past twelve years, and the lessons I have learned over the past year through the Masters of Applied Positive Psychology (MAPP) program at the University of Pennsylvania, I suggest that the power of the Soaringwords interventions, such as Soaring Superheroes, comes from impacting both physical and psychological systems in a measurable way, to allow the child and his or her support system to **SOAR**. Specifically, I propose a new positive psychology construct called **SOAR**.

Somatic:

Somatic movement activates a biological response that fully engages patients physically and emotionally. Taking physical action quite literally engages the whole self in service for another person as the patient physically creates a superhero for someone else. Somatic action synergizes with the altruistic act to become greater than merely thinking a kind thought for someone else.

Outcomes:

Empirically-based **outcomes**, as was done in this study, provide metrics that reflect improvements in a patient's well-being through the Soaringwords' intervention. Outcomes that can be empirically measured are more meaningful than best-selling "happyology" books, and theories of the month that claim to help people to "just be happy in five easy steps" without scientific theory or validation.

Agency:

The Soaringwords activities give patients a sense of **agency** - tremendous power as they are invited to create something that will have a positive impact on another person. The ideation, drawing and constructing of a personalized message gives patients a sense of strength, creativity, and control.

Reciprocity:

Reciprocity is built into all of the Soaringwords intervention as a way to allow patients to feel connected to others in deeply personal and emotional ways, even though they may never meet the recipient

of their SoaringSuperhero creations. One of the practices that makes Soaringwords unique is that we invite each ill child to “pay it forward” and do something kind rather than just being the recipient of good wishes and gifts from caring people. This gift of reciprocity is closely aligned to agency because it completely transforms and empowers the ill child. Each one of these positive SOAR domains has been measured in the study and has been found to reflect significant boosts in well-being, in spite of the patients’ many challenges due to medical frailty and illness.

The simple act of receiving and creating a SoaringSuperhero message from and for another ill child activates the SOAR well-being construct. In this way, hospitalized children can forget about their illness for a few minutes while remembering how to play, to laugh, and to do something nice for another person. In forgetting about suffering, they can remember that they are not simply a child with a serious illness tethered to an IV pole, but a person who cares for others and can take an active role in his or her own healing and the healing of others.

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Acknowledgements

I would like to thank my family for their love and support this past year. My husband Jacob for inside jokes, support and proof reading my papers; Jonathan for reading my papers; and Josh for believing in me and making me laugh. I would like to thank my parents, Jan and Charlie Honig for the joy of twice celebrating my graduation from the University of Pennsylvania -- first as an undergraduate awhile ago and now with a Masters. Everything in my life is enhanced by your presence. I would like to dedicate my Capstone to the memory of my brother, Gary Honig for the time we shared, albeit short, was complete and perfect.

This project and my MAPP journey would not have been possible without the support of my Soaringwords' team -- Greta Rozensweig, Community Relations Manager; and Rachel Gorman, Director of Hospital Outreach and Wellness Education; and Sparky, the Soaringwords mascot. Thank you both for allowing me to practice the positive interventions on our team as well as brainstorming, proof reading, photocopying all of the readings and large dollops of moral support. Rachel, thanks for your leadership with the hospitalized children and colleagues. If honorary degrees were conferred, you'd both easily qualify for your MAPP degrees. I would like to thank fellow traveler Joni Brenner for her scholarship and spiritual guidance. Sheryl Miller for unwavering support and Esther Levy-Symonds for phone check-ins and support.

Special thanks to all of the wonderful professors and visiting scholars who expanded my knowledge and quenched my thirst for positive psychology theories and wisdom that I could readily apply to my Soaringwords' constituencies of ill children and hospital professionals, student volunteers and employees who are searching for meaning and purpose through community service initiatives. To my new mentors and colleagues Jane Dutton; Barbara Fredrickson; Shane Lopez; Rich Tedeschi; and Tom Rath. To the extraordinary MAPP teaching assistants including Leona Brandwene, Dan Bowling, Dan Lerner and Dan Tomasulo, Mika Keener, Amy Walker and Reb Rebele; Johannes Eichstaedt, Kayleigh Pleas, Virginia Millar, Arthur Fullerton and David Yaden for your thoughtful comments which always added so much value.

And to the outstanding class of MAPP 8, each of you could have taught an entire course on positive psychology from your applied experiences.

Special thanks to Dr. James Pawelski, the heart and soul of the MAPP program for your considerable gifts of mastery in philosophy, humanities, positive psychology and the creation of thriving communities. Enormous gratitude to Dr. Judith Saltzberg Levick for being an incredible role model of what a positive psychology practitioner can be and for the powerful and immediate tools that I learned in your class which will surely be shared with millions of children and their families in the months and years ahead. And, to Dr. Martin Seligman for having the vision of creating a more flourishing world in our lifetime. Lastly, I want to thank Dr. Margaret Kern, my advisor and mentor. We met on the first day of MAPP and started working on this Capstone study during lunch. You are a wonderful addition to the Soaringwords team and I am grateful to have discovered such a gifted collaboration partner in you.

Appendix 1: Soaringwords' Reciprocity Model



Appendix 2: Participating hospitals

1. Joe DiMaggio Children's Hospital, Hollywood, Florida
2. Cohen Children's Medical Center, New Hyde Park, New York
3. Wellness House, Hinsdale, IL

Appendix 3: Survey instruments for treatment and control groups

Soaringwords Questionnaire & Script: Treatment Group, Adolescents (Age 10-18)

Participant information: age _____ male ☐ female ☐

I am going to ask you a few questions about who you are and how you are feeling. Let me know if you don't understand the questions. Depending on what you tell me, I will circle the answer on this sheet of paper.

OK? Let's try some. First, here are some things that might describe who you are and what you do in general. There are no right or wrong answers!

When something good happens to me, I have people in my life that I like to share the good news with	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I finish whatever I begin	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I am optimistic about my future	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I feel happy	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
When I do an activity, I enjoy it so much that I lose track of time	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I have a lot of fun	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I get completely absorbed in what I am doing	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I keep at my schoolwork until I am done with it	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
When I have a problem, I have someone who will be there for me	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I get so involved in activities that I forget about everything else	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I have goals for myself	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
My life is filled with important things.	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
When I am learning something new, I lose track of how much time has passed	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
In uncertain times, I expect the best	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
There are people in my life who really care about me	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
My life has meaning	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>

I think good things are going to happen to me

Not at all
○

A little like
me
○

Somewhat
like me
○

Mostly
like me
○

Very much
like me
○

No
answer
○

I have friends that I really care about

Not at all
○

A little like
me
○

Somewhat
like me
○

Mostly
like me
○

Very much
like me
○

No
answer
○

Once I make a plan to get something done, I stick to it

Not at all
○

A little like
me
○

Somewhat
like me
○

Mostly
like me
○

Very much
like me
○

No
answer
○

I believe that things will work out, no matter how
difficult they seem

Not at all
○

A little like
me
○

Somewhat
like me
○

Mostly
like me
○

Very much
like me
○

No
answer
○

I am a hard worker

Not at all
○

A little like
me
○

Somewhat
like me
○

Mostly
like me
○

Very much
like me
○

No
answer
○

I am a cheerful person

Not at all
○

A little like
me
○

Somewhat
like me
○

Mostly
like me
○

Very much
like me
○

No
answer
○

I have a clear purpose in life

Not at all
○

A little like
me
○

Somewhat
like me
○

Mostly
like me
○

Very much
like me
○

No
answer
○

Now I am going to ask you a few questions about how you are feeling **right now**. There are no right or
wrong answers!

I feel calm

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel tired

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel joyful

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel worried

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel excited

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel thankful

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel full of energy

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel sad

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel proud

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel active

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel hopeful

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel scared

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel positive

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel angry

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel appreciated

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel nervous

Not at all
○

A little bit
○

Moderately
○

Quite a bit
○

Very much
○

No answer
○

I feel grateful	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel grouchy	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel strong	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel happy	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>

Thank you so much for answering those questions! Someone made a SoaringSuperhero drawing and message as a gift just for you. Can I give you this gift?

[Hand the gift to the child. Let them see the drawing and read the message]

Isn't this nice? SuperMonkey.... That's funny. And the special message from the superhero to you is:

"Hoping to bring you love and happiness with my great big smile." Would you like to make a SoaringSuperhero drawing and message for another hospitalized child? I bet it would make another patient feel special to receive this gift. Would you like to do this?

[Hand the child the following materials: the Superhero instruction page, the blank border, a pencil and a box of crayons or markers. Read Instructions for the Soaringwords Activity]

That is an awesome drawing that you created! I know that the hospitalized child who gets this drawing is going to feel really great. Now I'd like to ask you a few questions about how you are feeling **right now**.

These are just like the questions you answered before the activity. You may feel the same way compared to how you felt before or you may feel differently now that you have made a superhero for another child.

I feel calm	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel tired	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel joyful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel worried	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel excited	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel thankful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel full of energy	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel sad	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel proud	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel active	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel hopeful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel scared	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel positive	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel angry	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel appreciated	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel nervous	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>

I feel grateful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel grouchy	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel strong	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel happy	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>

I have a few more questions about the Soaring SuperHeroes activity. I want to learn more about what it was like for you to draw your SuperHero for another child! Let me know if you don't understand the questions. I'm going to tell you something, and you will tell me how true it was.

Is it:

- 1 = Not true at all (You didn't enjoy drawing your SuperHero at all)
- 2 = Not really true (You didn't enjoy drawing your SuperHero very much)
- 3 = It's hard to tell
- 4 = A little bit true (You enjoyed drawing your SuperHero a little bit)
- 5 = Completely true (You really enjoyed the SuperHero activity!)

Whenever I found a problem with my SuperHero, I was able to solve it	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I felt sure that I could do a good job of drawing my SuperHero	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I knew I would be able to draw my SuperHero even when it was hard	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I felt like I could draw my SuperHero independently, all on my own	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I thought I could achieve all the goals I had in mind for my SuperHero	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I thought I could make a really good SuperHero	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I used my imagination to draw my SuperHero	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I felt sure that I could draw a creative and interesting SuperHero	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I thought my SuperHero was really unique	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I came up with ideas no one else thought of to draw my SuperHero	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I came up with new ways to make my SuperHero exciting and cool-looking	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>
I felt sure that my SuperHero was one of a kind	Not true at all <input type="radio"/>	Not really true <input type="radio"/>	Hard to tell <input type="radio"/>	A little bit true <input type="radio"/>	Completely true <input type="radio"/>	No answer <input type="radio"/>

Thanks for sharing your answers with me. I really enjoyed spending time with you today.

[Researcher: Please ask the child the following question and write down what they say here:]

What is your ethnicity?

- ☐ White/Caucasian ☐ Black/African American ☐ Asian ☐ Hispanic/Latino
☐ Pacific Islander ☐ Native American/Alaskan ☐ Not sure ☐ Other _____

What was it like to make a Superhero for another ill child?

How do you think the child will feel when they get your Superhero gift? _____

How does this make you feel?

Anything else you would like to share?

Observation comments to complete when you leave the room. (e.g. Child started out very quiet and withdrawn, but during and after the activity, warmed up and was more talkative & animated. Talk about what superhero they made and what qualities they selected. Comments on parent reactions).

Soaringwords Questionnaire: Treatment Group, Younger Children (Age 6-9)

Participant information: age _____ male ☐ female ☐

I am going to ask you a few questions about who you are and how you are feeling. Let me know if you don't understand the questions. Depending on what you tell me, I will circle the answer on this sheet of paper.

OK? You can say yes, no, or don't know. Remember that's it's ok to say no!

I finish everything that I begin	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel happy	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
When I do an activity, I enjoy it so much that I lose track of time	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
When I have a problem, I have someone who will be there for me	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I get so involved in activities that I forget about everything else	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I think good things are going to happen to me	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I have friends that I really care about	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
Once I make a plan to do something, I stick to it	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I believe that things will work out, no matter how hard they seem	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I am a cheerful person	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I have a clear purpose in my life	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>

Now I am going to ask you a few questions about how you are feeling **right now**. There are no right or wrong answers. Remember that it's ok to say no or "don't know"

I feel calm	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel tired	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel joyful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel worried	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel excited	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel thankful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel full of energy	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel sad	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel proud	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel active	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel hopeful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel scared	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel positive	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel angry	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel appreciated (others think I'm important)	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel nervous	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel grateful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel grouchy	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>

I feel strong

No

Yes

Don't know

☐

☐

☐

I feel happy

No
☐

Yes
☐

Don't know
☐

Thank you so much for answering those questions! Someone made a SoaringSuperhero drawing and message as a gift just for you. Can I give you this gift?

[Hand the gift to the child. Let them see the drawing and read the message to them.]

Isn't this nice? SuperMonkey.... That's funny. And the special message from the superhero to you is:

"Hoping to bring you love and happiness with my great big smile." Would you like to make a SoaringSuperhero drawing and message for another hospitalized child? I bet it would make another patient feel special to receive this gift. Would you like to do this?

[Hand the child the following materials: the Superhero instruction page, the blank border, a pencil and a box of crayons or markers. Read Instructions for the Soaringwords Activity]

That is an awesome drawing that you created! I know that the hospitalized child who gets this drawing is going to feel really great. Now I'd like to ask you a few questions about how you are feeling **right now**. These are just like the questions you answered before you did the superhero activity. You may feel the same way compared to how you felt before you did the activity or you may feel different now that you made a superhero for another child.

I feel calm

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel tired

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel joyful

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel worried

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel excited

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel thankful

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel full of energy

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel sad

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel proud

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel active

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel hopeful

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel scared

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel positive

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel angry

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel appreciated (others think I'm important)

Less than before
activity
☐

Same as before
activity
☐

More than before
activity
☐

Don't
know
☐

I feel nervous	Less than before activity <input type="radio"/>	Same as before activity <input type="radio"/>	More than before activity <input type="radio"/>	Don't know <input type="radio"/>
I feel grateful	Less than before activity <input type="radio"/>	Same as before activity <input type="radio"/>	More than before activity <input type="radio"/>	Don't know <input type="radio"/>
I feel grouchy	Less than before activity <input type="radio"/>	Same as before activity <input type="radio"/>	More than before activity <input type="radio"/>	Don't know <input type="radio"/>
I feel strong	Less than before activity <input type="radio"/>	Same as before activity <input type="radio"/>	More than before activity <input type="radio"/>	Don't know <input type="radio"/>
I feel happy	Less than before activity <input type="radio"/>	Same as before activity <input type="radio"/>	More than before activity <input type="radio"/>	Don't know <input type="radio"/>

I have a few more questions about the Soaring SuperHeroes activity. I want to learn more about what it was like for you to draw your SuperHero for another child! Let me know if you don't understand the questions. You can answer yes, no, or don't know. Remember that's it's ok to say no or don't know.

When I found a problem with my SuperHero, I was able to solve it	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I felt sure that I could do a good job of drawing my SuperHero	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I knew I would be able to draw my SuperHero even when it was hard	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I felt like I could draw my SuperHero independently, all on my own	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I thought I could achieve all the goals I had in mind for my SuperHero	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I thought I could make a really good SuperHero	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I used my imagination to draw my SuperHero	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I felt sure that I could draw an interesting SuperHero	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I thought my SuperHero was really unique (no one else would draw one like mine)	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I came up with ideas no one else thought of to draw my SuperHero	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I came up with new ways to make my SuperHero exciting and cool-looking	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I felt sure that my SuperHero was one of a kind	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>

Thanks for sharing your answers with me. I really enjoyed spending time with you today!

Ask parents – or observe for yourself - what is the child's ethnicity?

<input type="radio"/> White/Caucasian	<input type="radio"/> Black/African American	<input type="radio"/> Asian	<input type="radio"/> Hispanic/Latino
<input type="radio"/> Pacific Islander	<input type="radio"/> Native American/Alaskan	<input type="radio"/> Not sure	<input type="radio"/> Other _____

[Researcher: Please ask the child the following question and write down what they say here:]

What was it like to make a Superhero for another ill child?

How do you think the child will feel when they get your Superhero gift? _____

How does this make you feel?

Anything else you would like to share?

Soaringwords Questionnaire & Script: Control Group, Adolescents (Age 10-18)

Participant information: age _____ male ☐ female ☐

I am going to ask you a few questions about who you are and how you are feeling. Let me know if you don't understand the questions. Depending on what you tell me, I will circle the answer on this sheet of paper. OK? Let's try some. First, here are some things that might describe who you are and what you do in general. There are no right or wrong answers!

When something good happens to me, I have people in my life that I like to share the good news with	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I finish whatever I begin	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I am optimistic about my future	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I feel happy	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
When I do an activity, I enjoy it so much that I lose track of time	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I have a lot of fun	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I get completely absorbed in what I am doing	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I keep at my schoolwork until I am done with it	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
When I have a problem, I have someone who will be there for me	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I get so involved in activities that I forget about everything else	Almost never <input type="radio"/>	Sometimes <input type="radio"/>	Often <input type="radio"/>	Very Often <input type="radio"/>	Almost Always <input type="radio"/>	No answer <input type="radio"/>
I have goals for myself	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
My life is filled with important things.	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
When I am learning something new, I lose track of how much time has passed	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>

In uncertain times, I expect the best	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
There are people in my life who really care about me	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
My life has meaning	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
I think good things are going to happen to me	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
I have friends that I really care about	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
Once I make a plan to get something done, I stick to it	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
I believe that things will work out, no matter how difficult they seem	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
I am a hard worker	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
I am a cheerful person	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>
I have a clear purpose in life	Not at all like me <input type="radio"/>	A little like me <input type="radio"/>	Somewhat like me <input type="radio"/>	Mostly like me <input type="radio"/>	Very much like me <input type="radio"/>	No answer <input type="radio"/>

Now I am going to ask you a few questions about how you are feeling **right now**. There are no right or wrong answers!

I feel calm	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel tired	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel joyful	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel worried	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel excited	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>

I feel thankful	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel full of energy	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel sad	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel proud	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel active	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel hopeful	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel scared	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel positive	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel angry	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel appreciated	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel nervous	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel grateful	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel grouchy	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel strong	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>
I feel happy	Not at all <input type="radio"/>	A little bit <input type="radio"/>	Moderately <input type="radio"/>	Quite a bit <input type="radio"/>	Very much <input type="radio"/>	No answer <input type="radio"/>

Thank you so much for answering those questions! Someone made a SoaringSuperhero drawing and message as a gift just for you. Can I give you this gift?

[Hand the gift to the child. Let them see the drawing and read the message]

Isn't this nice? SuperMonkey.... That's funny. And the special message from the superhero to you is:

"Hoping to bring you love and happiness with my great big smile."

[Let the child enjoy the drawing (e.g., look at it, show his or her parents). If child is quiet, chat with the child or parents a bit]

Before I go, I'd like to ask you a few more questions about how you are feeling **right now**. These are just like the questions you answered a few minutes ago. You may feel the same way compared to how you felt before or you may feel differently.

I feel calm	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel tired	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel joyful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel worried	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel excited	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel thankful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel full of energy	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel sad	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel proud	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel active	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel hopeful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel scared	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel positive	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel angry	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel appreciated	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel nervous	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel grateful	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel grouchy	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel strong	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>
I feel happy	A lot less <input type="radio"/>	A little less <input type="radio"/>	About the same <input type="radio"/>	A little more <input type="radio"/>	A lot more <input type="radio"/>	No answer <input type="radio"/>

Thanks for sharing your answers with me. I really enjoyed spending time with you today.

[Researcher: Please ask the child the following question and write down what they say here:]

What is your ethnicity?

- ☐ White/Caucasian ☐ Black/African American ☐ Asian ☐ Hispanic/Latino
☐ Pacific Islander ☐ Native American/Alaskan ☐ Not sure ☐ Other _____

Anything else you would like to share?

Observation comments to complete when you leave the room. (e.g. Child started out very quiet and withdrawn, but warmed up and was more talkative & animated. Comments on parent reactions).

Soaringwords Questionnaire & Script: Control Group, Younger Children(Age 6-9)

Participant information: age _____ male ☐ female ☐

I am going to ask you a few questions about who you are and how you are feeling. Let me know if you don't understand the questions. Depending on what you tell me, I will circle the answer on this sheet of paper. OK? You can say yes, no, or don't know. Remember that's it's ok to say no or don't know

I finish everything that I begin	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel happy	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
When I do an activity, I enjoy it so much that I lose track of time	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
When I have a problem, I have someone who will be there for me	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I get so involved in activities that I forget about everything else	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I think good things are going to happen to me	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I have friends that I really care about	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
Once I make a plan to do something, I stick to it	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I believe that things will work out, no matter how hard they seem	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I am a cheerful person	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I have a clear purpose in my life	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>

Now I am going to ask you a few questions about how you are feeling **right now**. There are no right or wrong answers. It's ok to say no or don't know.

I feel calm No ☐ Yes ☐ Don't know ☐

I feel tired	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel joyful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel worried	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel excited	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel thankful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel full of energy	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel sad	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel proud	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel active	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel hopeful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel scared	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel positive	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel angry	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel appreciated (others think I'm important)	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel nervous	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel grateful	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel grouchy	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel strong	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>
I feel happy	No <input type="radio"/>	Yes <input type="radio"/>	Don't know <input type="radio"/>

Thank you so much for answering those questions! Someone made a SoaringSuperhero drawing and message as a gift just for you. Can I give you this gift?

[Hand the gift to the child. Let them see the drawing and read the message]

Isn't this nice? SuperMonkey.... That's funny. And the special message from the superhero to you is:

"Hoping to bring you love and happiness with my great big smile."

[Let the child enjoy the drawing (e.g., look at it, show his or her parents). If child is quiet, chat with the child or parents a bit]

Before I go, I'd like to ask you a few more questions about how you are feeling **right now**, now that I gave you this drawing. These are just like the questions you answered a few minutes ago. You may feel the same way compared to how you felt before or you may feel differently than before you received the drawing.

I feel calm	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel tired	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>

I feel joyful	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel worried	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel excited	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel thankful	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel full of energy	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel sad	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel proud	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel active	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel hopeful	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel scared	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel positive	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel angry	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel appreciated (others think I'm important)	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel nervous	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel grateful	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel grouchy	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel strong	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>
I feel happy	Less than before I got the drawing <input type="radio"/>	Same as before I got the drawing <input type="radio"/>	More than before I got the drawing <input type="radio"/>	Don't know <input type="radio"/>

Thanks for sharing your answers with me. I really enjoyed spending time with you today.

[Researcher: Please ask the child the following question and write down what they say here:]

Ask parents – or observe for yourself - what is the child's ethnicity?

☐ White/Caucasian

☐ Black/African American

☐ Asian

☐ Hispanic/Latino

☐ Pacific Islander

☐ Native American/Alaskan

☐ Not sure

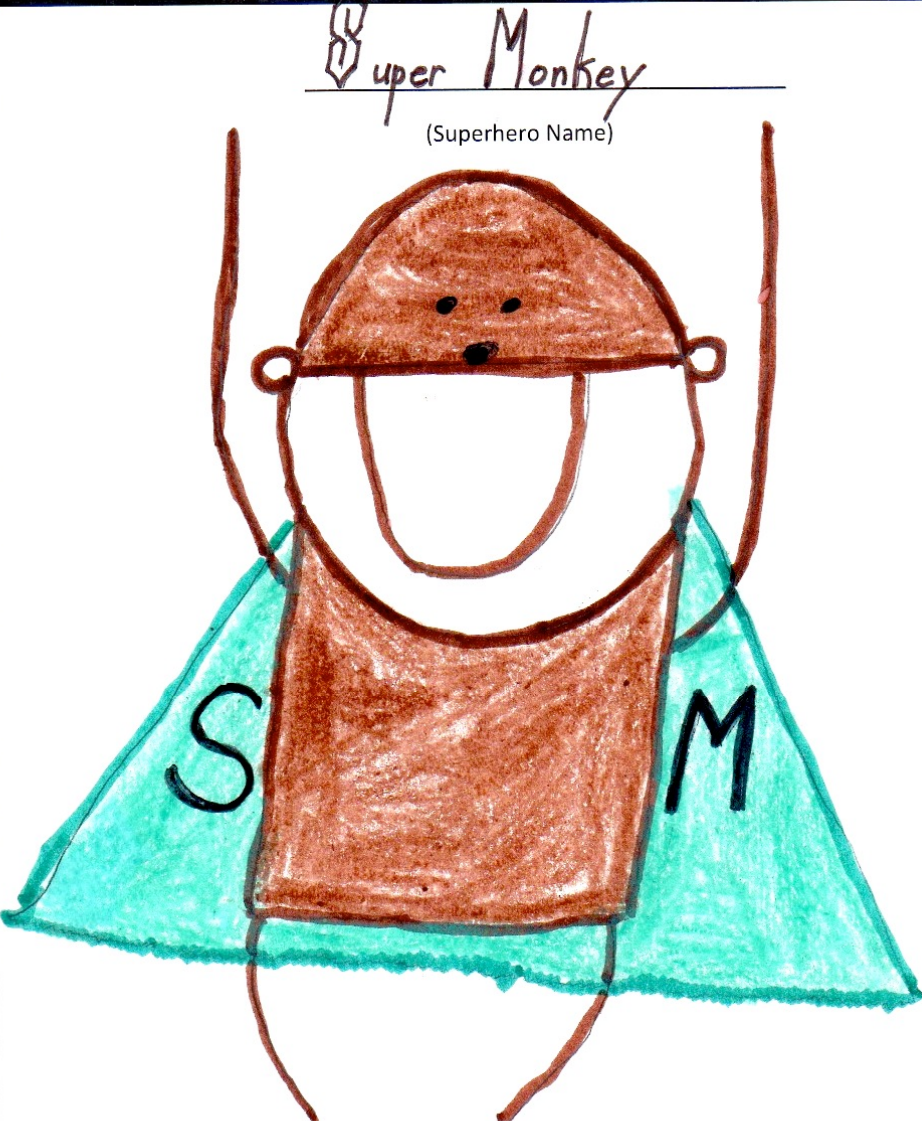
☐ Other _____

Anything else you would like to share?

Observation comments to complete when you leave the room. (e.g. Child started out very quiet and withdrawn, but warmed up and was more talkative & animated. Comments on parent reactions).

Appendix 4: SoaringSuperhero “SuperMonkey gift” given to patients

SoaringSuperheroes®

A hand-drawn illustration of a superhero character. The character has a brown, textured mask with two small black dots for eyes and a small black dot for a nose. The mask is connected by a brown strap to a brown, textured cape. The cape is triangular and has a large black letter 'S' on the left side and a large black letter 'M' on the right side. The character's arms are raised, and its legs are visible at the bottom. The drawing is done in a simple, childlike style with brown and green colors.

Super Monkey
(Superhero Name)

My Superhero message for YOU:
Hoping to bring you love and happiness with my
big great smile.

www.soaringwords.org

Appendix 5: : 1-28 of Superhero artifacts that patients created for other people

Figure 1, Happiness Bringer



Figure 2, Super Happy

SoaringSuperheroes®

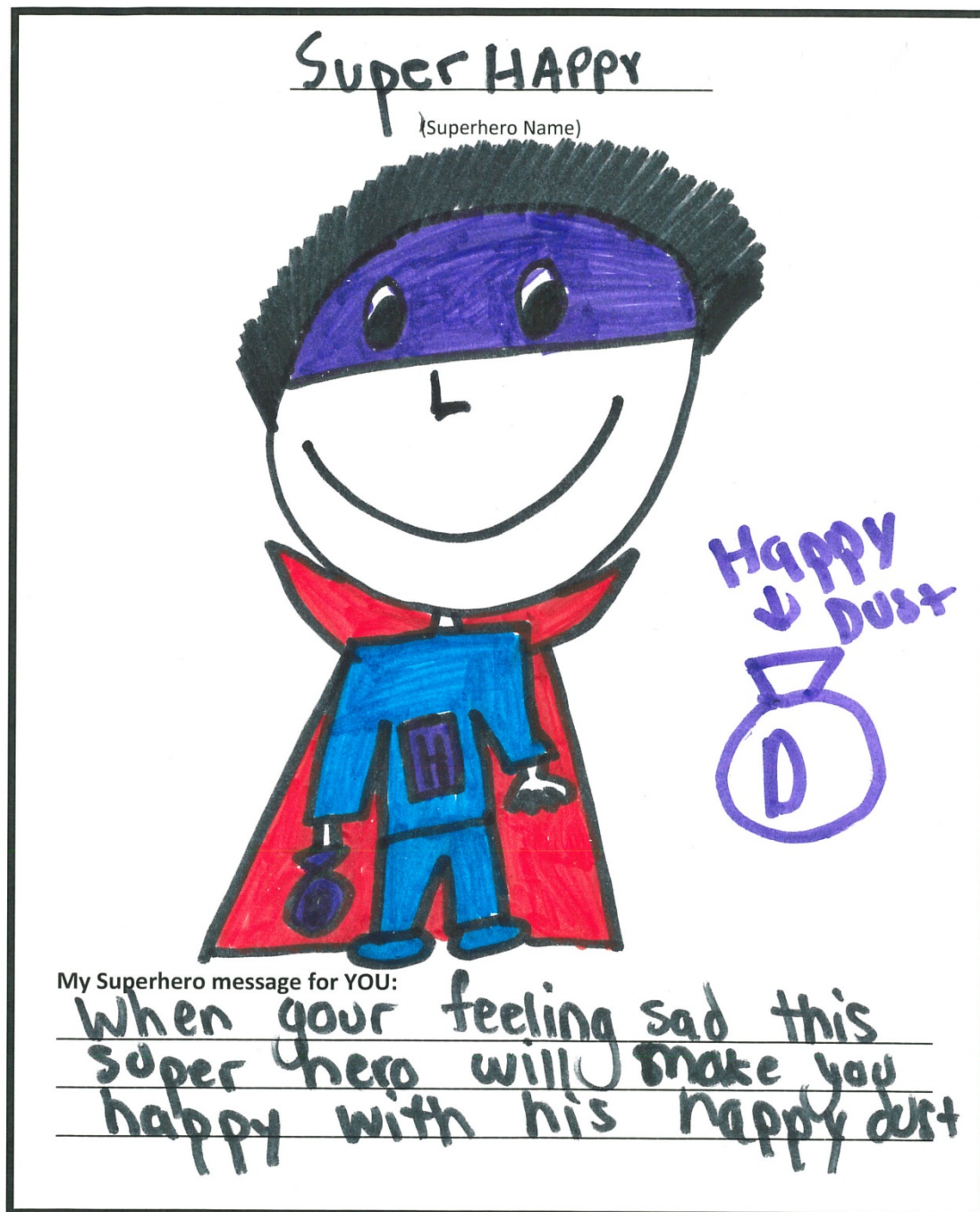
www.soaringwords.org

Figure 3, Rainbow Dash

SoaringSuperheroes®

Rain Bow Dash

(Superhero Name)



My Superhero message for YOU:

You're 20% cooler than you think
you are.


www.soaringwords.org

Figure 4, Dr. Ali

SoaringSuperheroes®

DR. Ali _____

(Superhero Name)



My Superhero message for YOU:

Hoping you a stress-free good healthy
life.


www.soaringwords.org

Figure 5, Fun Guy

SoaringSuperheroes®

Fun and Cool

(Superhero Name)



My Superhero message for YOU:

**I Hope to bring you fun and
Happiness with my Cool outfit.**

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Figure 6, Tiger Boxer

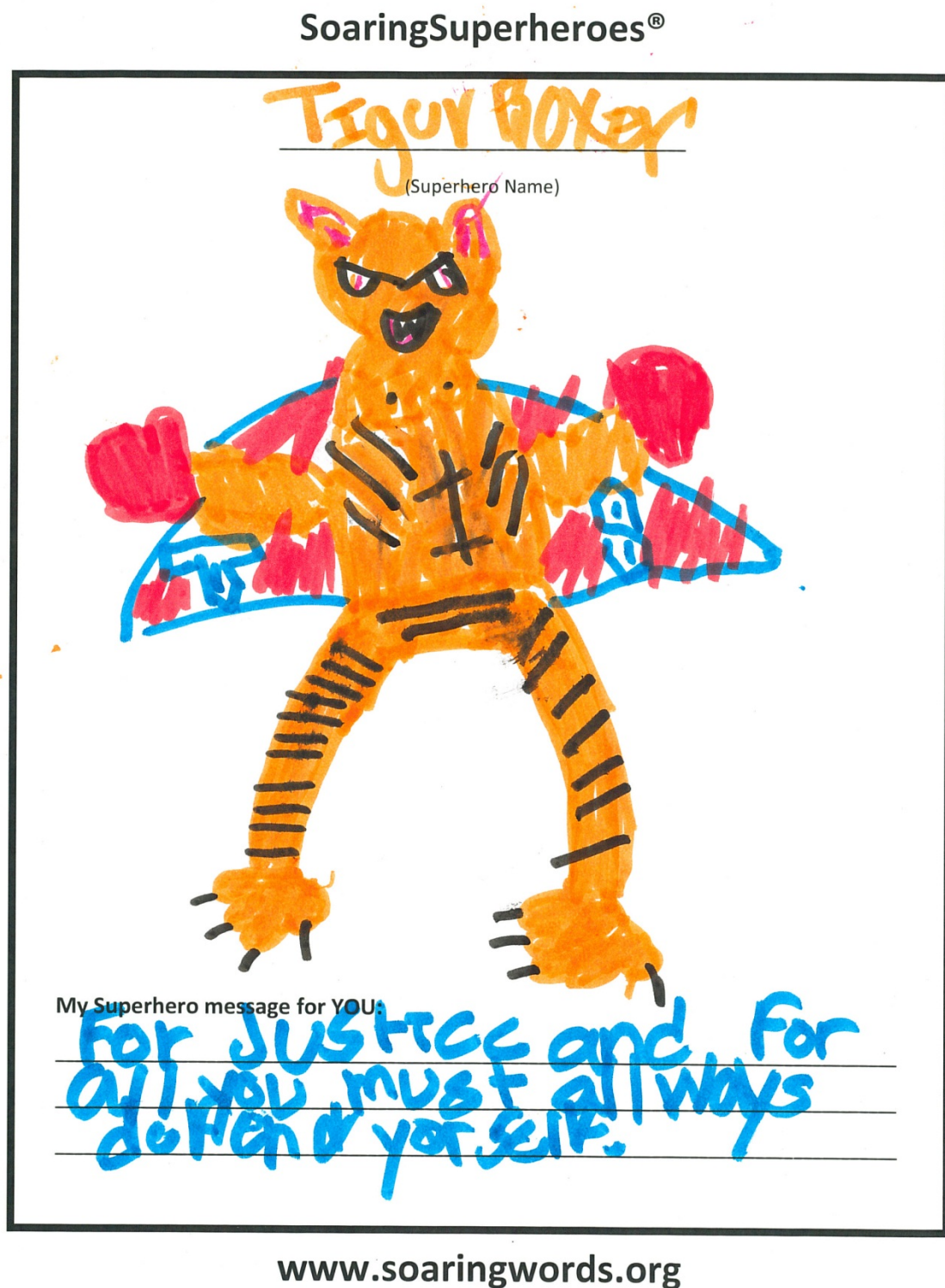


Figure 7, Power Rangers



Figure 8, Super Pig

SoaringSuperheroes®

(Superhero Name)



My Superhero message for YOU:

isave the world

www.soaringwords.org

Figure 9, Best Friend Forever



Figure 10, Pat

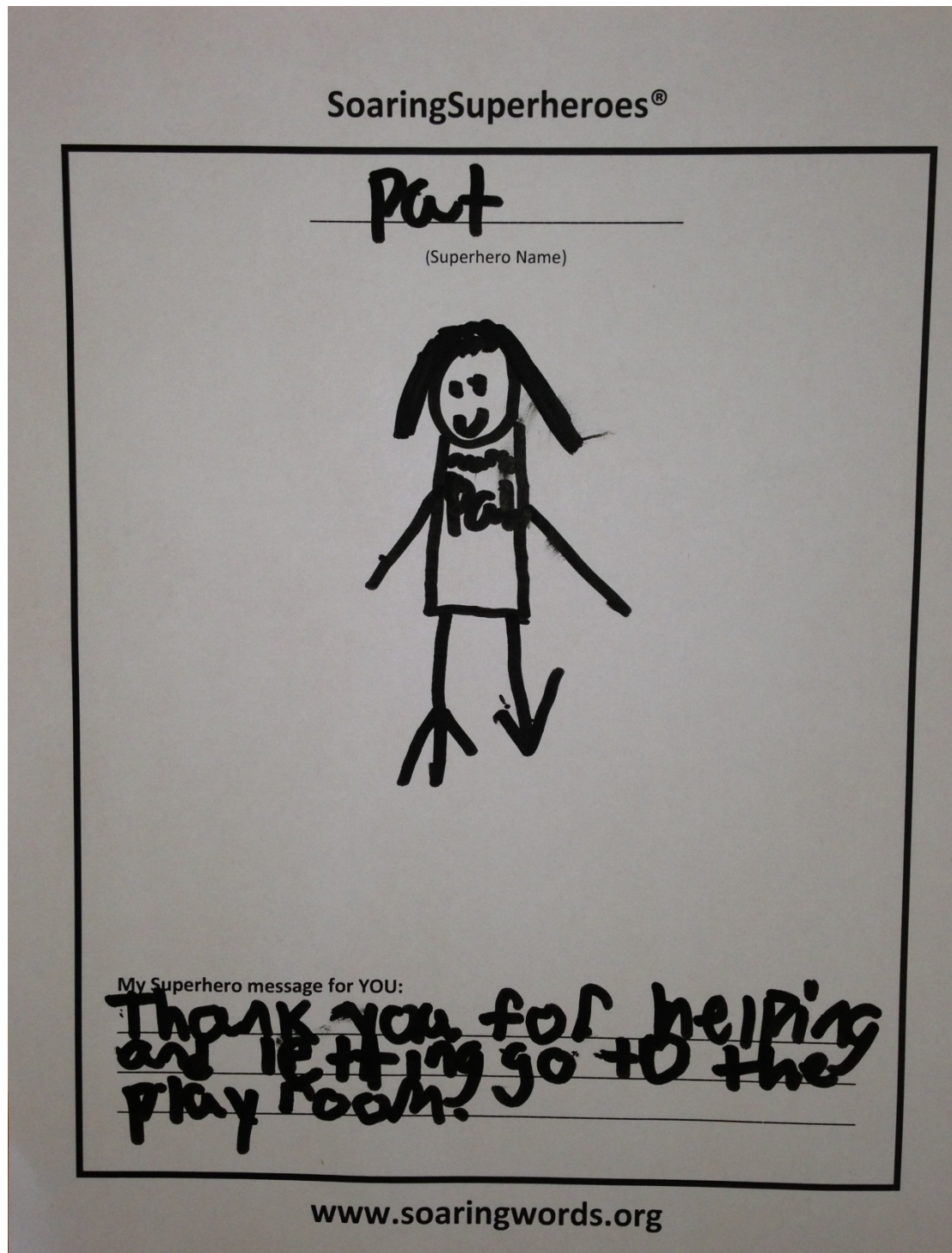


Figure 11, Emmanuel

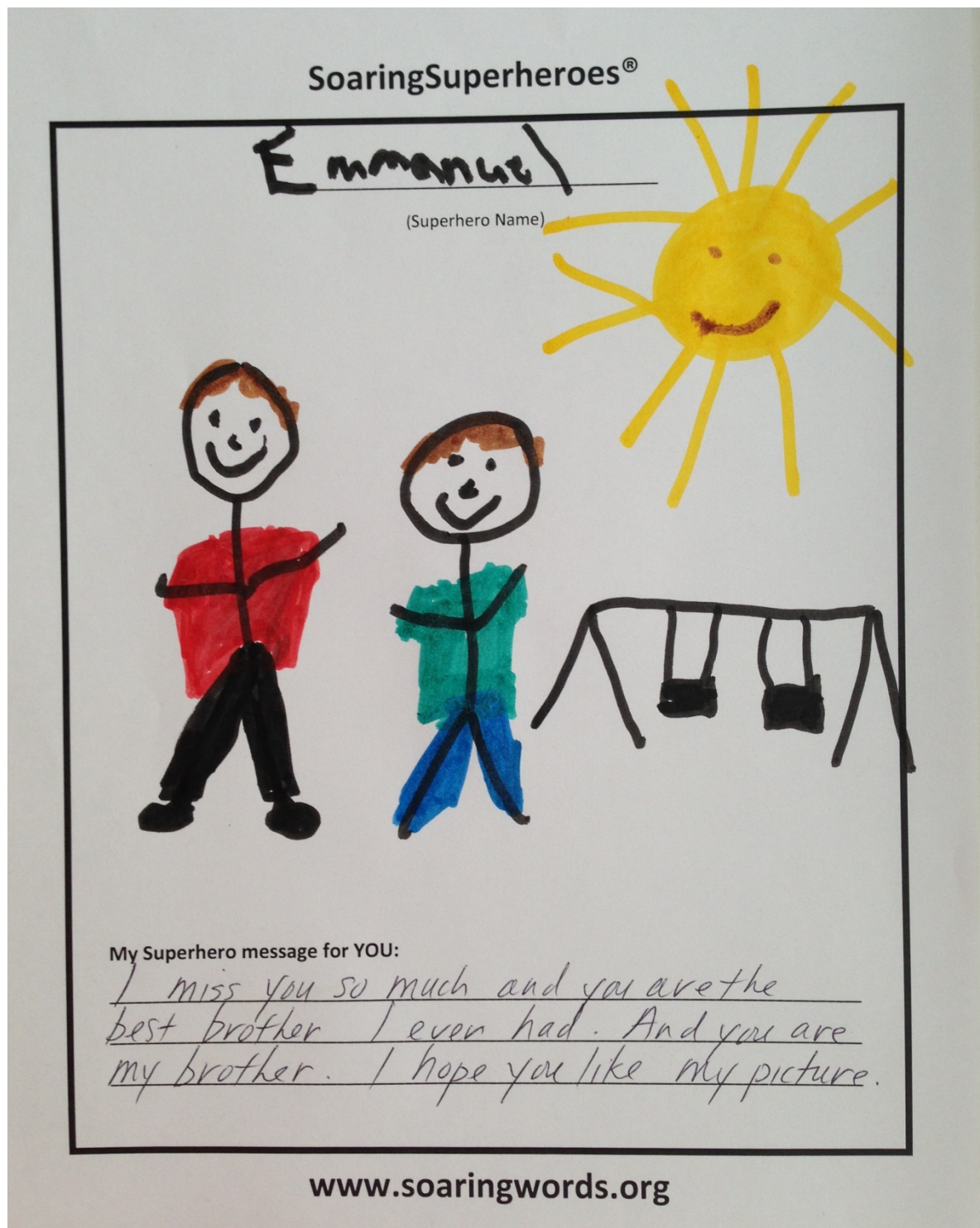
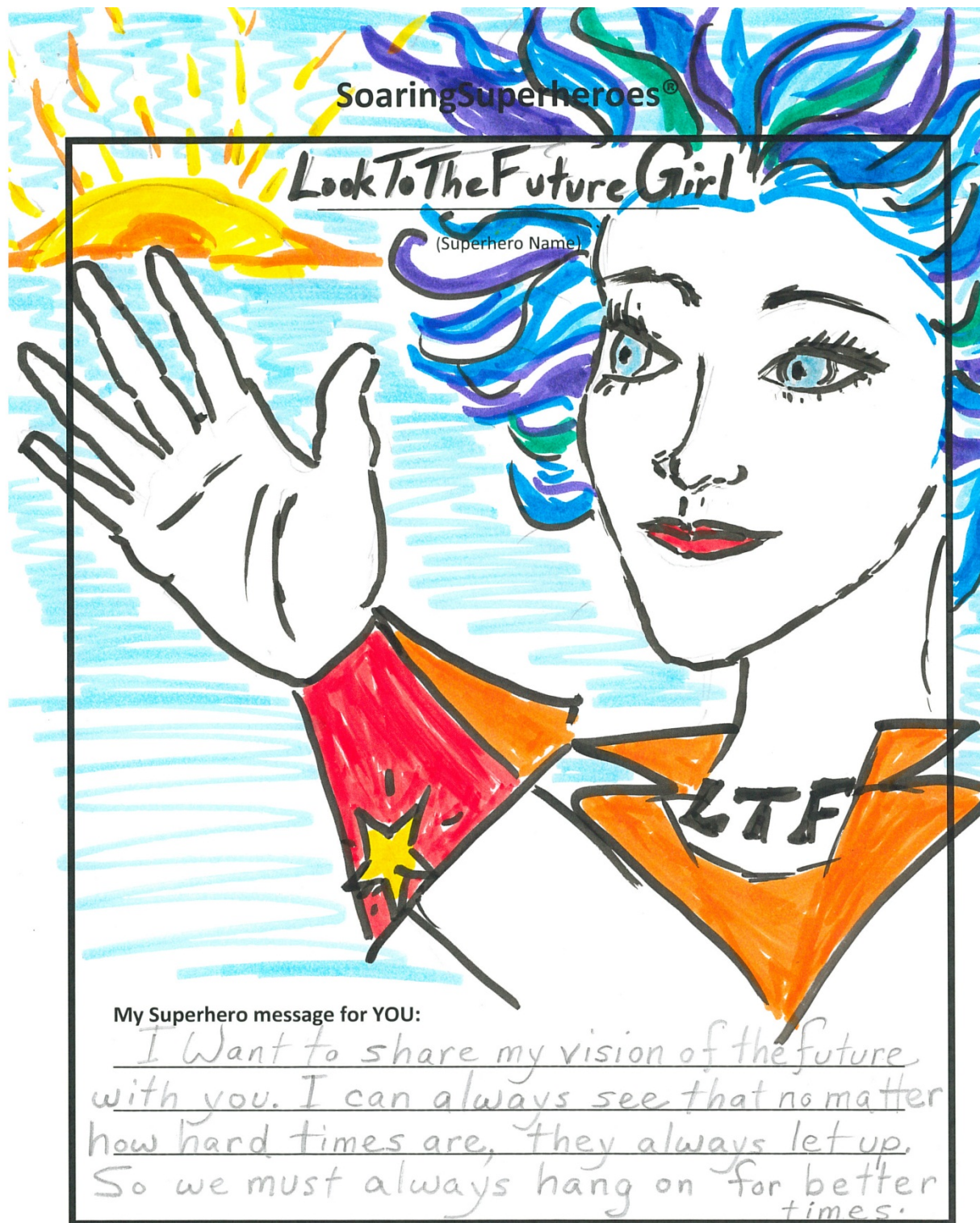


Figure 12, Look to the Future Girl



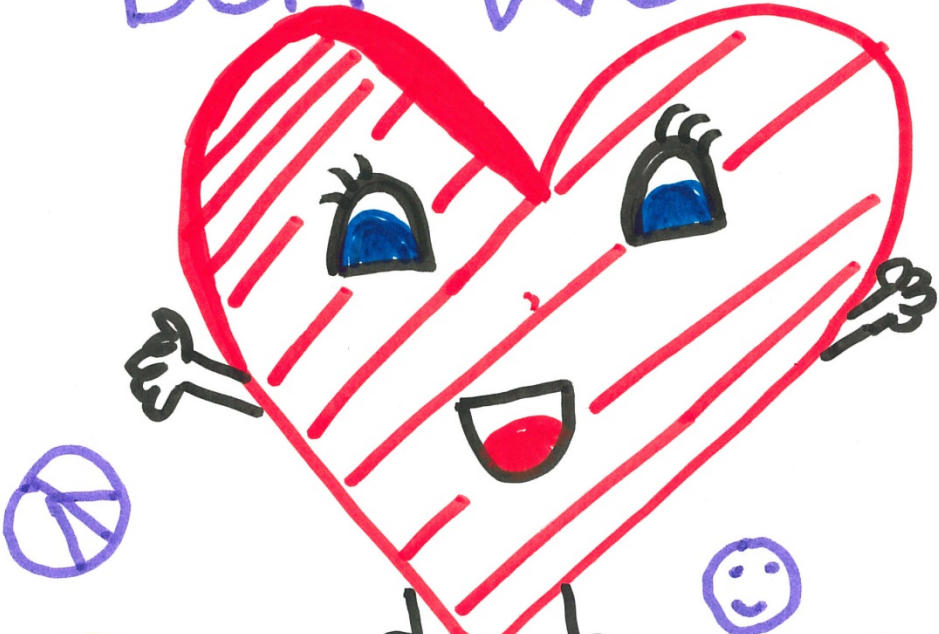
www.soaringwords.org

Figure 13, Ms. Happy

SoaringSuperheroes®

Ms. Happy♥
(Superhero Name)

Don't WORRY



Be Happy =)

My Superhero message for YOU:

Always be happy no matter
what. You are very
Special. ♥

www.soaringwords.org

Figure 14, Key to the World

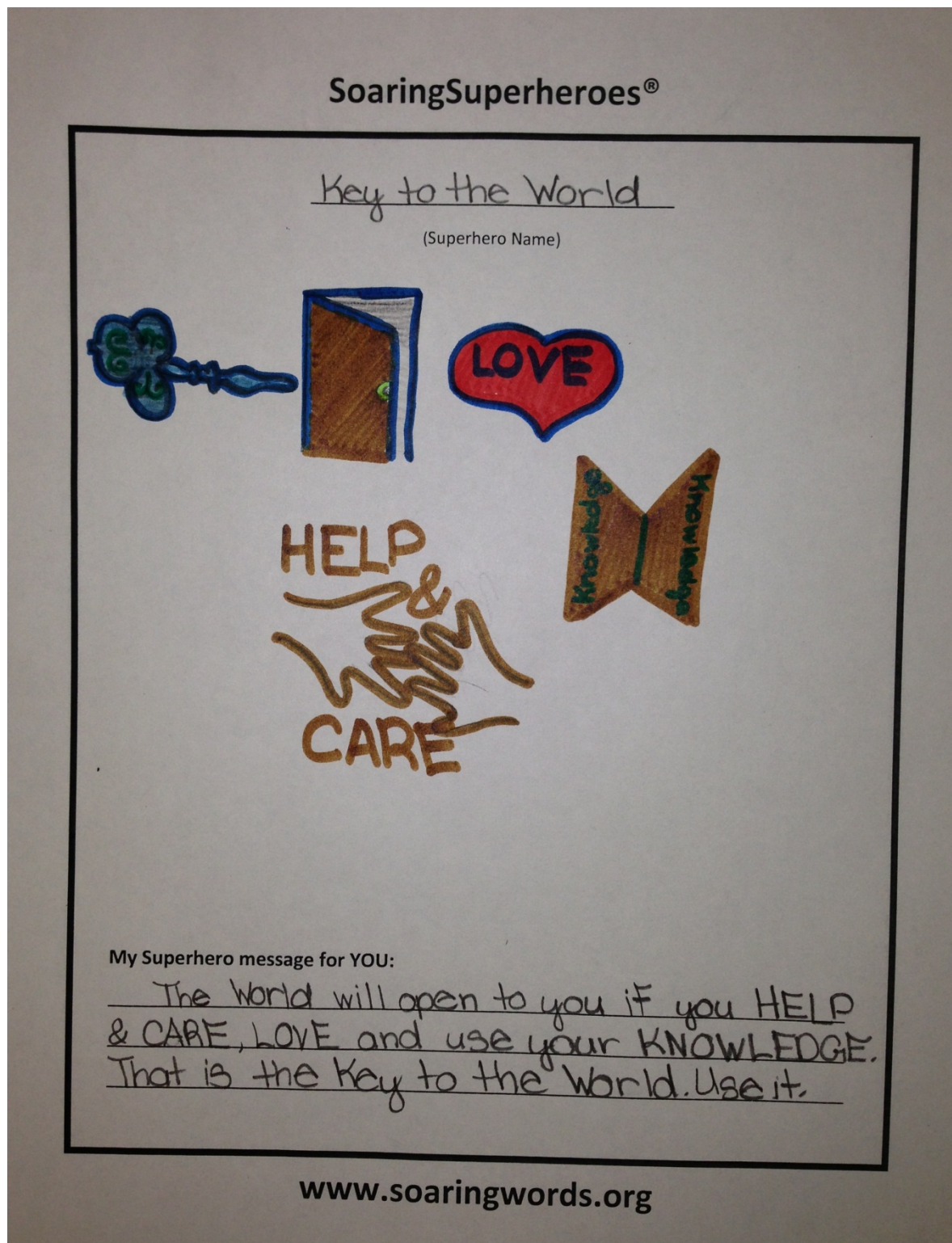


Figure 15, Blooming Hope

SoaringSuperheroes®

Blooming Hope
(Superhero Name)



My Superhero message for YOU:

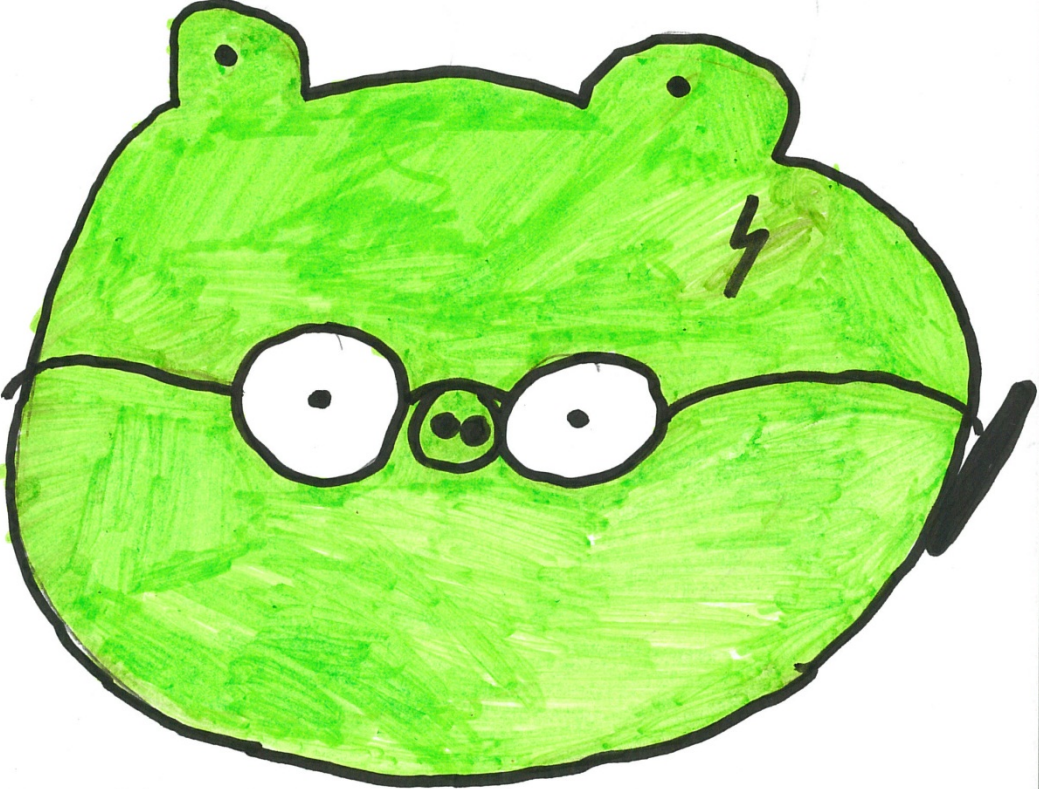
Hoping that you will get better. Hoping that
you are going to be okay. Hoping that you're
strong, just like the roots of the flower

www.soaringwords.org

Figure 16, Harry Porker

SoaringSuperheroes®

Harry Porker
(Superhero Name)



My Superhero message for YOU:
Hoping for pork magic and pig fun! Have a
magical day! P.S. Dont run into the angry birds!

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Figure 17, Super Star



Figure 18, Hope

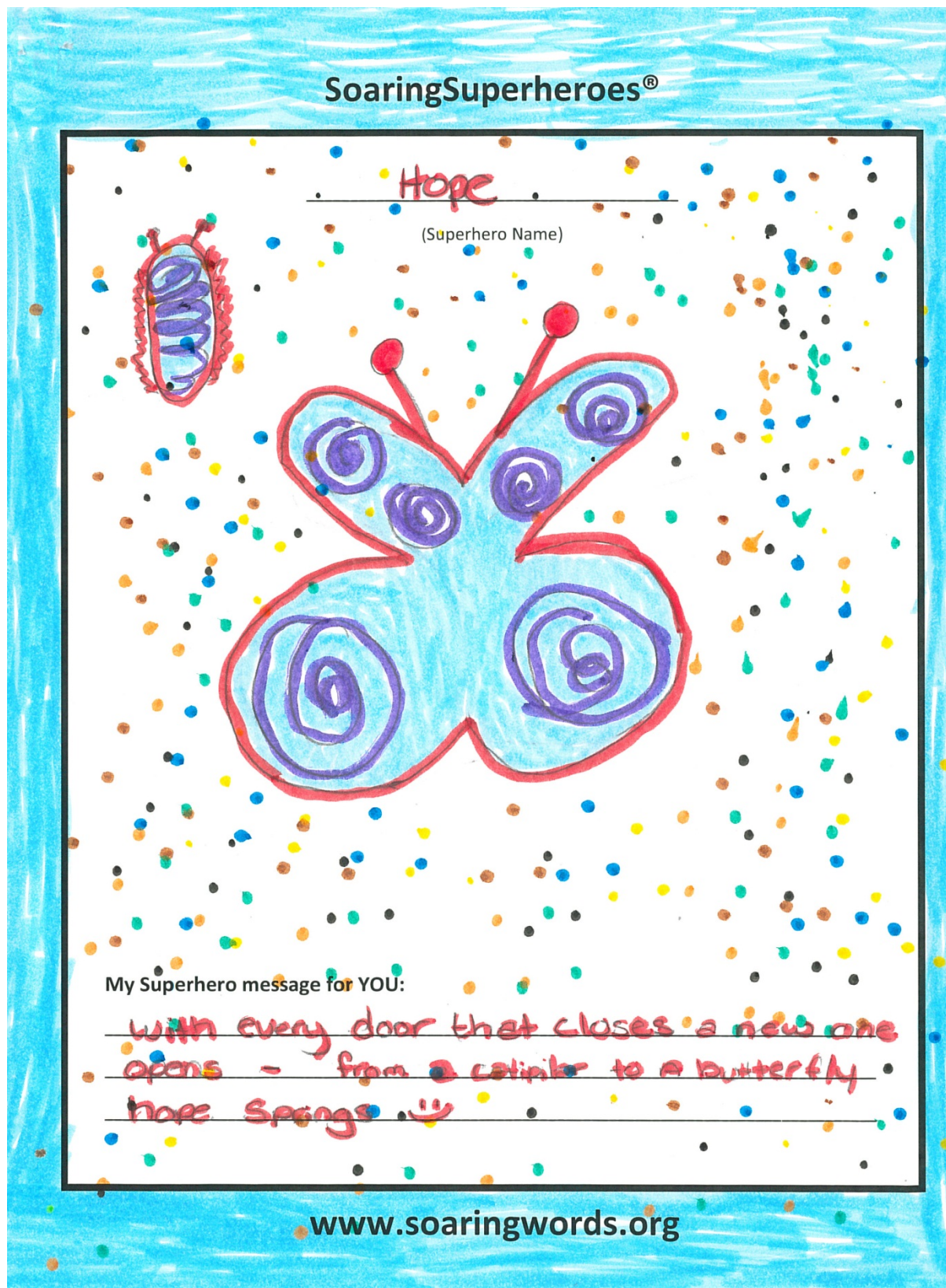



Figure 19, LCC

SoaringSuperheroes®

LCC (Love, confidence, care)
(Superhero Name)



My Superhero message for YOU:
Feel your heart with Love, confidence, and care.
No matter how bad things get, and no matter who
causes it, they'll always be hope. Enjoy it.

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Figure 20, Athletic Man

SoaringSuperheroes®

Athletic Man

(Superhero Name)



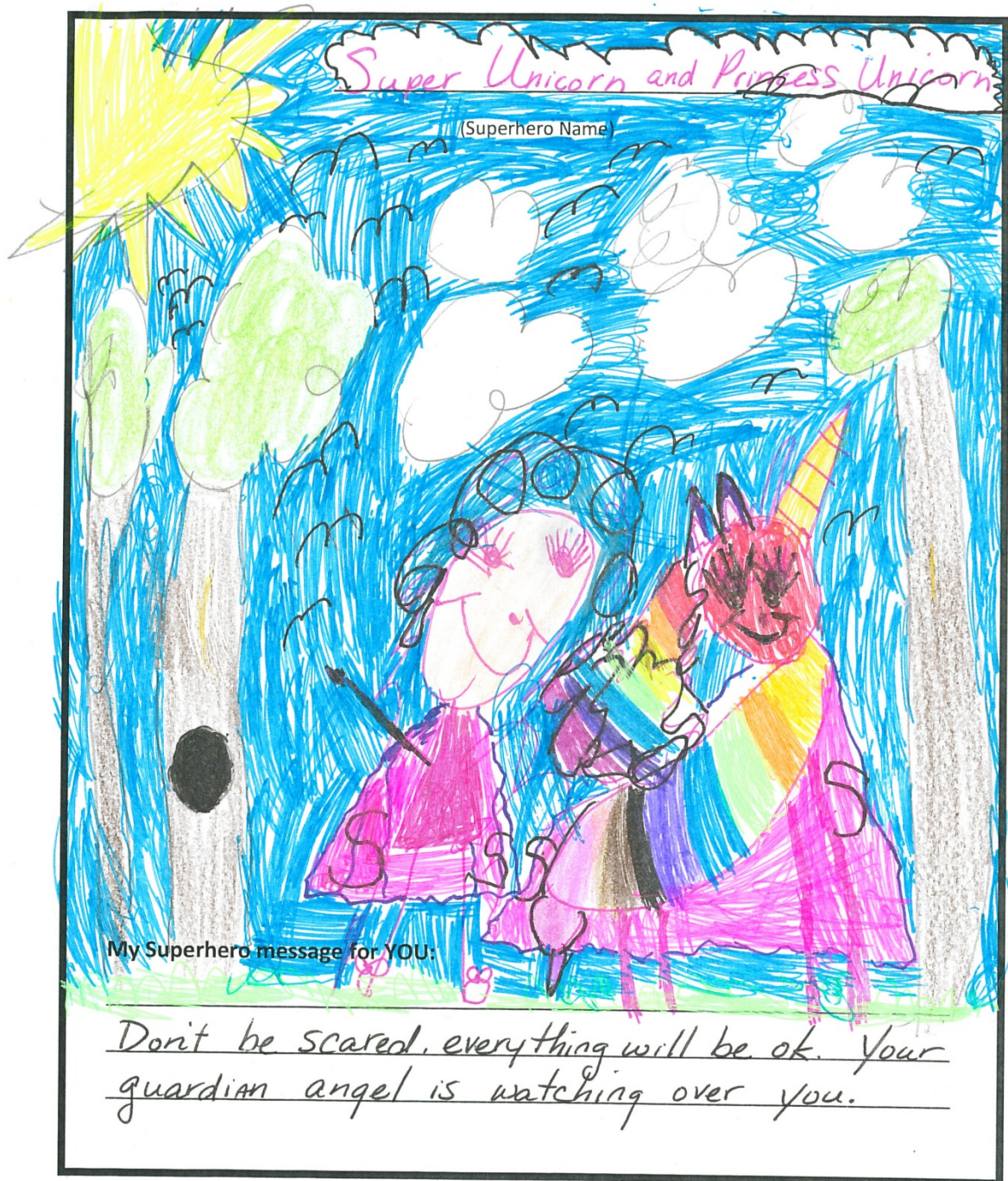
My Superhero message for YOU:

Never quit on anything. Whether
your losing or winning play
your best until the end

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Figure 21, Super Unicorn and Princess Unicorn

SoaringSuperheroes®



www.soaringwords.org

Figure 22, Ayudame

SoaringSuperheroes®

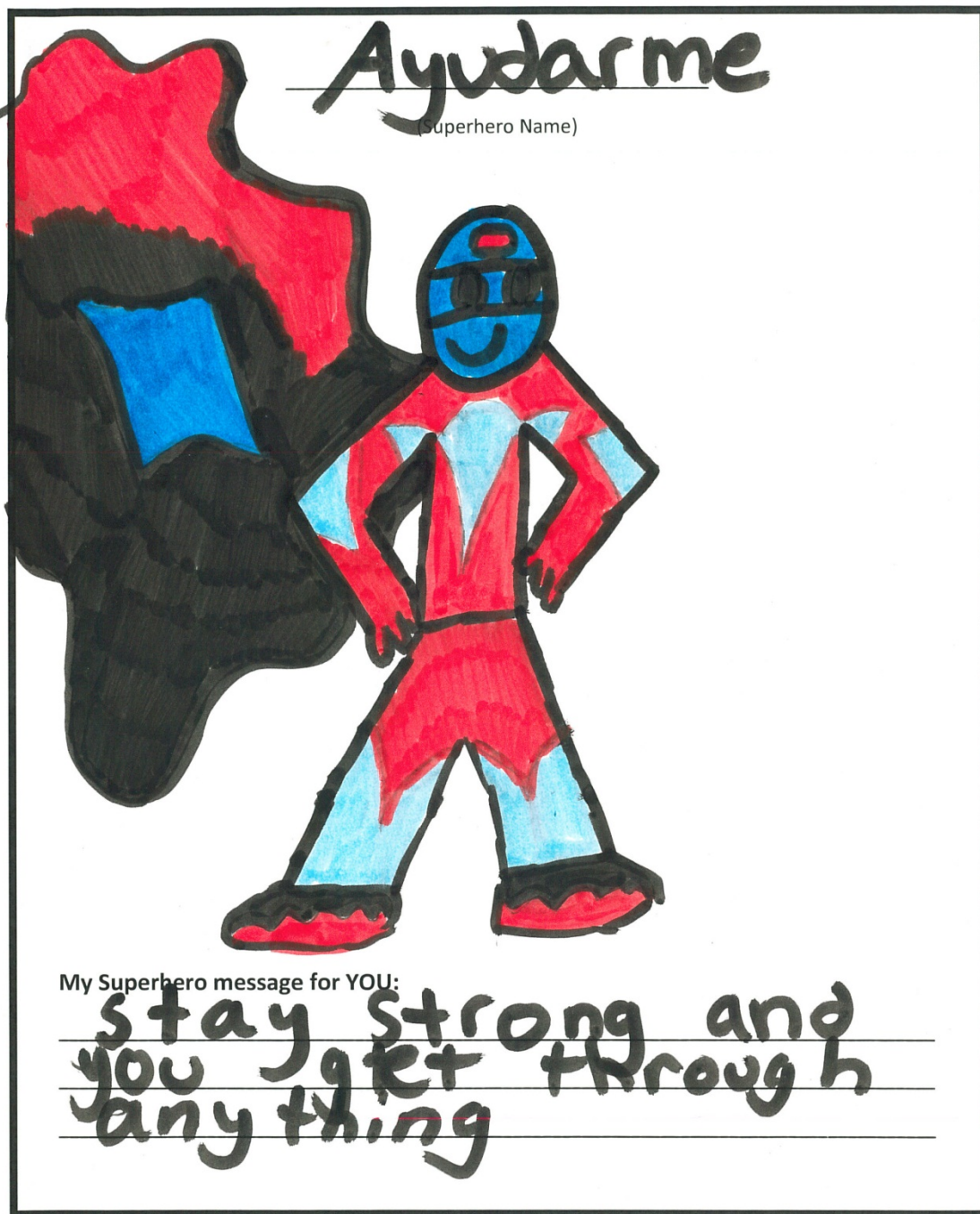
www.soaringwords.org

Figure 23, Cape Dude

SoaringSuperheroes®Cape Dude

(Superhero Name)

**My Superhero message for YOU:**

Just like Cape Dude overcomes
evil, so too you can overcome
your sickness.

www.soaringwords.org**Figure 24, Add Man**

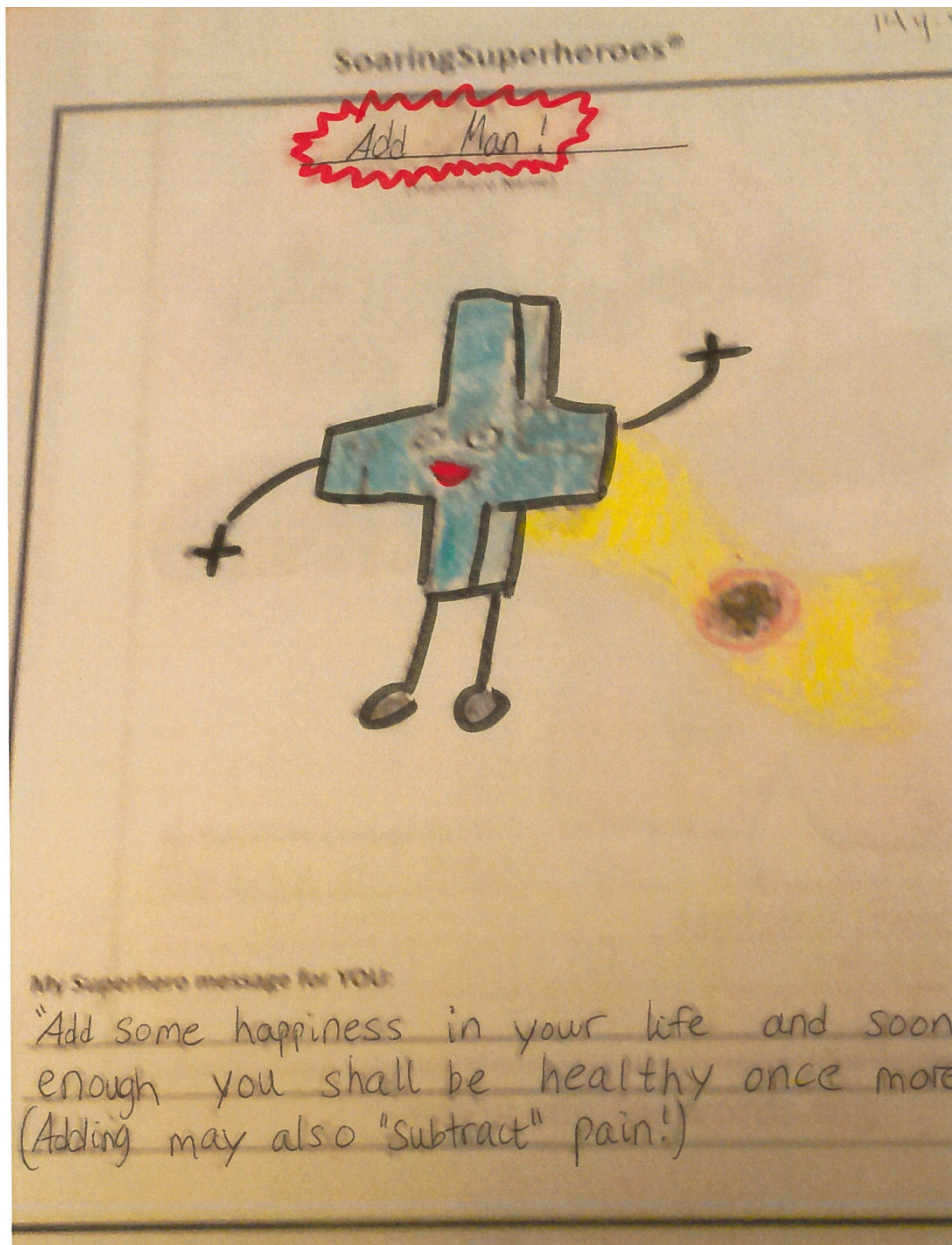


Figure 25, Zach the Great

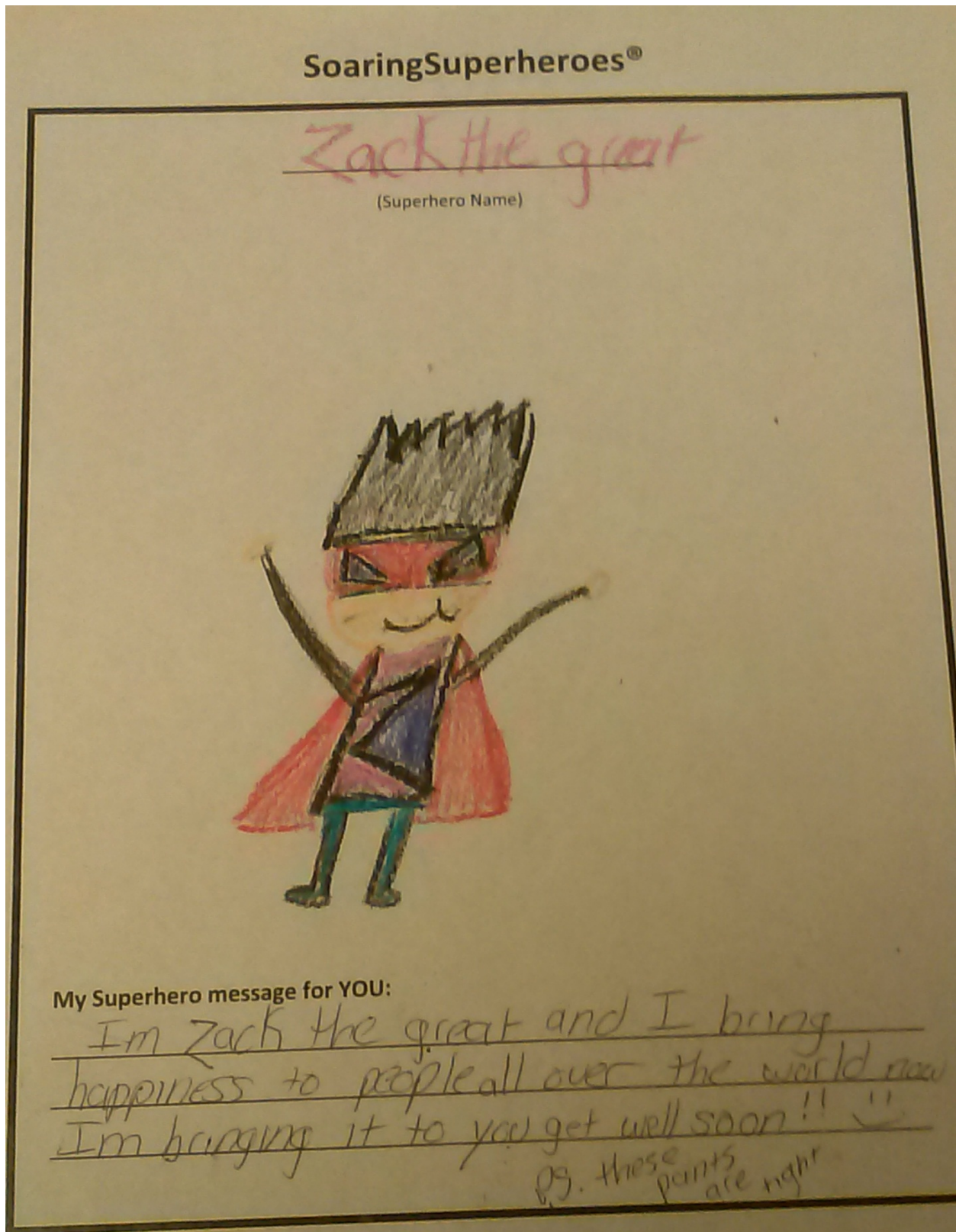


Figure 26, The Orange Princess

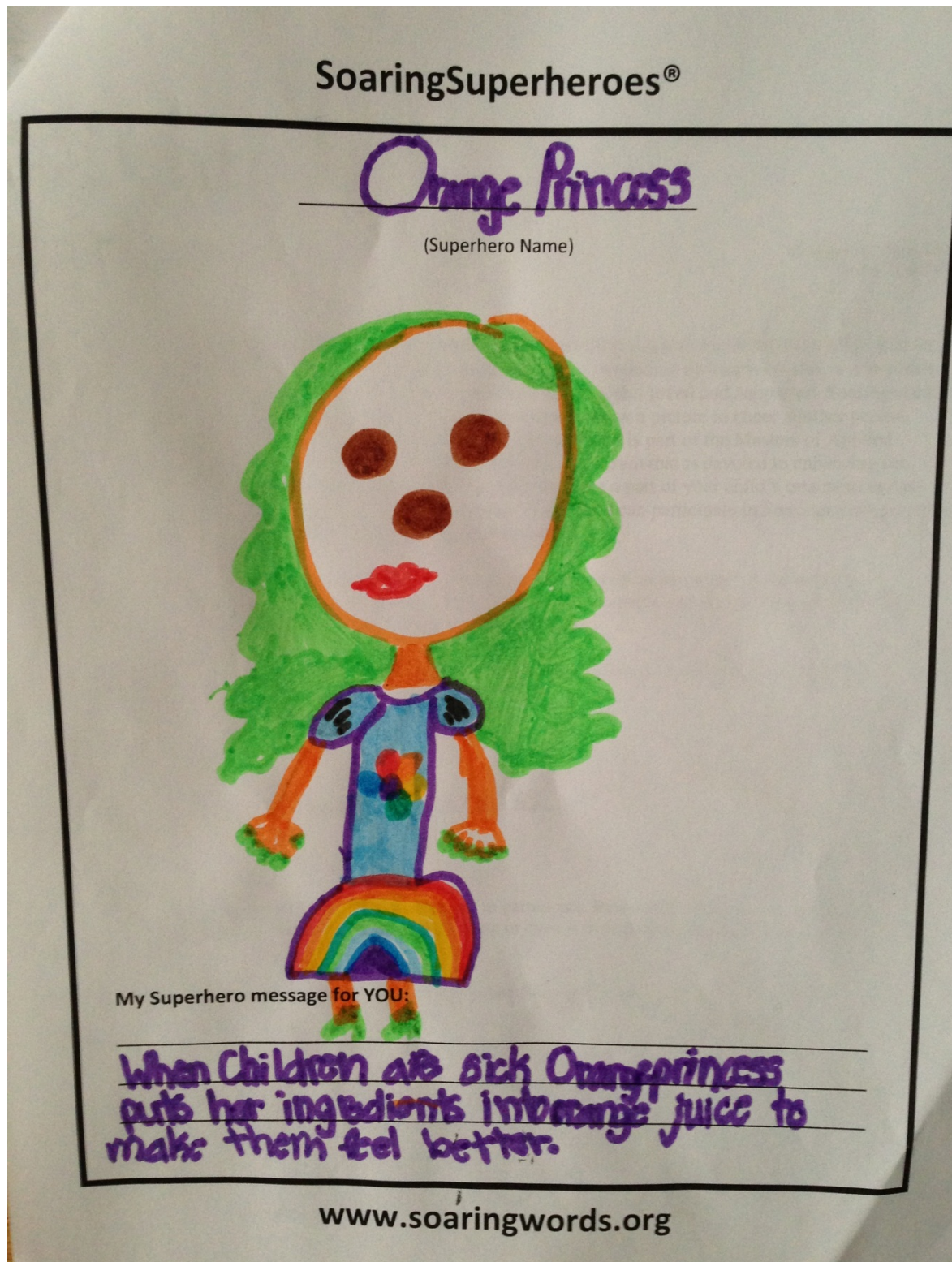


Figure 27, Cancer Man

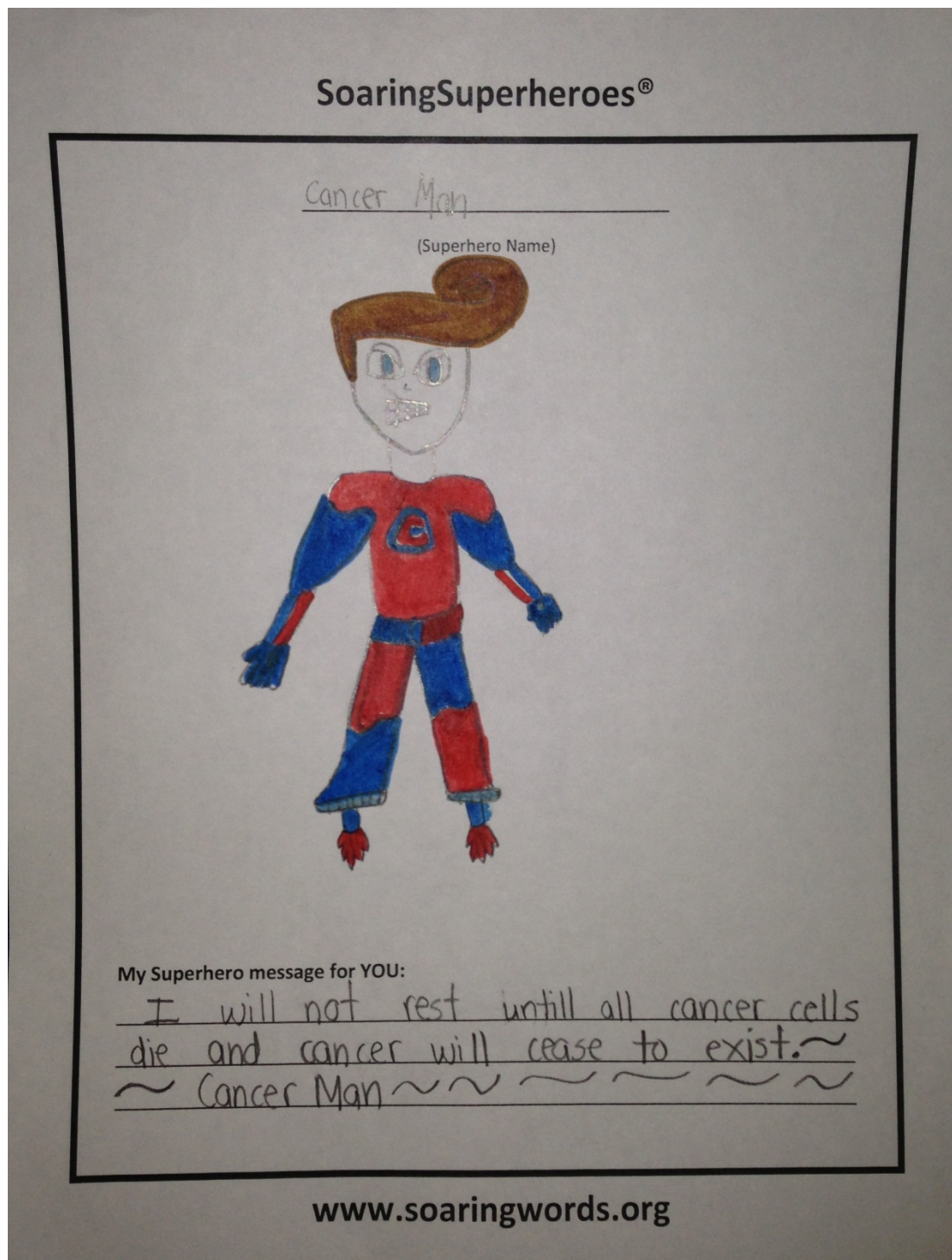



Figure 28, Super Girl

SoaringSuperheroes®

Super Girl
(Superhero Name)



My Superhero message for YOU

I hope I can fill your heart with love and sweetness.
I hope I can make you ~~feel~~ feel better.

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Appendix 6: Pawelski model (n.d.) of Superhero

Elements	SoaringSuperhero exercise
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Activity	Creation of a superhero (writing and coloring) with unique super-powers to cheer another ill child.
Active Ingredient	Imagination/Creativity and thinking about another person creates empathy which shifts focus and changes attention
Target System	Cognition. Child has to think about what kind of super-powers he or she will endow the superhero. What message will the child create for the superhero to give to an ill child? How will the recipient feel to get the personalized superhero gift?
Target Change	Shift of focus. Possibility for flow state while doing something kind for someone else.
Desired Outcome	Enhance subjective well-being through altruism, reciprocity. Child can experience feelings of accomplishment, pride, doing something nice for someone else.